

00196US1.ST25
SEQUENCE LISTING

<110> Vogeli, Gabriel

<120> Novel G Protein-Coupled Receptors

<130> 00196US1 -

<150> 60/195,150

<151> 2000-04-06

<150> 60/195,099

<151> 2000-04-06

<150> 60/195,151

<151> 2000-04-06

<150> 60/195,148

<151> 2000-04-06

<150> 60/195,093

<151> 2000-04-06

<150> 60/195,098

<151> 2000-04-06

<150> 60/230,149

<151> 2000-09-05

<160> 117

<170> PatentIn version 3.0

<210> 1

<211> 661

<212> DNA

<213> Homo sapiens

<400> 1

acacagtgtg cacacacgtg cagggacata cccccttccc caactgcctg gcctgcacac 60

ttggcatttc cagtatttct aggaagtgat ggctctgtgc atcctgagcc aatccagctc 120

cgagcctcca aggcattcctg gtgatgggca gctggaagct ctgcctctga ggccttcaca 180

caccacacctt cgggtcaaact tgcttctgct gaggaacttg gtgtgtcttc cttctgggca 240

ggaggtcaca tttgagagca caggagcagt gcctgcccc cgggaatgtg gctctgggta 300

gaattgcagg ctcagggggtt ttgggcagga gagcaccaac cgtgccacac ccacacagac 360

acggtcactg gggccctgca gcaggacga ccgcacttcc caaagggtg ggaagccatg 420

tccagaggag gccatgtctt agctcccttg ggcagggtg gctgcaagga ggtgaagtt 480

gggcatcttg aaccagaga agtagaggac tcagcaccag cacaaccagc tcggcgcatc 540

aatacacatt cctctccac ttctcccaa gcctgaaaa acctcaaacc agcctctttg 600

cagctccctg aggtcatgac tcacgaacca tgctcggggc aggggaaaag aaaagcatcc 660

g 661

<210> 2

<211> 627
 <212> DNA
 <213> Homo sapiens

<400> 2
 ctaaaggagg aatagatgtc ttttaagaaga aatgaaaaaa taaagtaaag gtgaaaattt 60
 cccttactta tttccaaaca agtgctcctc caaaaaaatg caaataatta agtttctgaa 120
 atggtgaaca tatkagatta gtagacatat ggcaggagca gcaaatgagc agatcaagtt 180
 gaagtcctag tattaccaat ctgttaatgt tgacaggaag actcattttg actgttcctt 240
 ttatatcaat aaatgagtgg atttcaacta ctctaaatag gaatgctaaa agcagcactg 300
 ctaaaagtgc atatcaaacc aataattttc tgatgctggt ttggtatatc ctacaaacat 360
 ttgtaggaca acaactcaga agggaaaaaa atatcttatg cctttgaggt ctgtactgaa 420
 tgctaatagca tttgtatatg atgggtttta tacagaactg agaataaatt actttcagca 480
 gctgcactct agacctataa atcgctctga gtactacaaa atccatacaa aggaagaaca 540
 gctggataat ttacaccacc agtatattgtc aaaaaaaaaa aaaaaaagct gaaaatacag 600
 aacctgattt tgtccctttt tcgagta 627

<210> 3
 <211> 297
 <212> DNA
 <213> Homo sapiens

<400> 3
 aggggccctc cagcactggg cttgaagggg tgacaggggc tggggctctga ctcccacctc 60
 caccacttcc cacctgaggg ccctggaatg aatcctttcc tggatctgag ctgccacatc 120
 atcagtgaag atgacaccta tatgggactt cagtgagaac acaaatgcaa cgttcctgcc 180
 acggaacaac ccatgtactc actgggagca ttgagagtag atccacactg attgacacag 240
 ggactccagg cctgacccat gatatgtact ggatacatgg ccatgagtgc tccacag 297

<210> 4
 <211> 649
 <212> DNA
 <213> Homo sapiens

<400> 4
 acaccaaata ctgctttgct gccttaggct tcagcacatt agcatggctt cctcccttgg 60
 catggtaact gtagctgaac ttggagggtt tgtattacc attataatta ttacttattt 120
 cacatggaag acaagaaaat ctttatggga attccaagtt ccccttagga ataccaaaga 180
 gaggaaaaag gctttgagga tggctctgat gtgtgaagt gtgttcattg tgtgtttcac 240
 tccttaccac ctcaacttcc cattctttat gatggtgaag gaacatgtct ttttgaactg 300
 ctcttttata aagatcattc tctgtttcca cattatttcc ctgtgtcttg caaatctgaa 360
 ttgttgtctt gatccagttg tatattattt tatgacctca aaatttcag atcaattttc 420

00196US1.ST25

agatcatggc agcttggttc ttcagtcacg tatgagatgt aataacagta ccttagaaat 480
 tcatcagagg aaggaggat cttcaaaacta tctctcttga atgtttgaaa gattccaaga 540
 caatataatc aaataattaa ctagaaaaat cgatatgctc tattagtgtg tctatgtcac 600
 tttgaagatt tttcttcttt ttttttcttt ttttttatta tactttaag 649

<210> 5
 <211> 626
 <212> DNA
 <213> Homo sapiens

<400> 5
 aatgctactg ctctgcata taatagctgc tttgaagtgt ttgtctgcta tgtccaaaac 60
 atagactctt tcaaaagcac tttctgttgt ctcttttttc tcttgcatag gagtcacatt 120
 tttctgtctc ttcacatatt tcatatttat tttgttgaa aaccagacat tttagataat 180
 gtgttgtagc agtcagata ctgattctct ccccaggag ctgttgtctt tcttacttgt 240
 atatgtgttt agtgacttgg ctggactatt ttaataatgt gtatttcctt gtagtatata 300
 ccatctttta tactaatgtt acttttccga tagtgcagcc ttgggcatgg acagagttat 360
 cctgggatga cagtaacttt taatagggtc ctctatgact atctctttcc ctgatgtccc 420
 tgtaagcta tctgcatctc ttggtatcac acctagcctt tgacttccac taattgtttg 480
 atcattgcct cactgttttt ggcagtgtcc taaggcataa agtgttccac agtctgatat 540
 aattaaattc agattcttac aagagtgtgc tttgaggcca gtccttgagg tttgtgctga 600
 ctctgggagg gctcaaagt ttcctt 626

<210> 6
 <211> 400
 <212> DNA
 <213> Homo sapiens

<400> 6
 cctcacatcc ccttcccctc aaaccctggc aaccccaaac tgttcttgac agcctccttt 60
 ggcatttcct cattttggtg tcagatctca cagcagaatt tcttacctat tatataccag 120
 tgcctcagtg tgaagttccg gtttaacttc ttgttaccac gagcccaacta tcttgcccca 180
 ataataccct cccccaattc acaaacacac aagcattccc tcttacagct ttgggcctcc 240
 tatctgagtc cttcaggaaa gaagtgtgtg gtaactccct tggcagttag tgtagacttg 300
 gtccaaggaa gatgagcacc agtcagggca gctgggccc cttctctccc tggccatcag 360
 caaatcagca ctgcccacg atgcccaggc aatgggagcg 400

<210> 7
 <211> 556
 <212> DNA
 <213> Homo sapiens

<400> 7

attactatattt ttcaacctct tttactccag ggacttctat gcaccctctc cctcaactcc 60
 cctcaatttt gttctcataa tccccatgac cccagtttt ataacaccac tgtcaggagc 120
 ccaaagctgc cattcattca cttccattag catgactctt catgtacttt ggggtcttca 180
 gtctctcccc ttctcctaata ttcagggtt ccattctgct tctgctggct tccctacaaa 240
 gcctgcaaca tcataagcca tttcaggaaa gagcttgatc atcttttgat gaaccctgca 300
 ttcatgactc actgccttac ctgtctttgg ctctgcatgt ccccgagttt ccgtttcttt 360
 ctctggaaag agagattgcc caagagtcct gcacatcagc attactagaa atgcatgcag 420
 accagcttca gctgcttgcc aactctttaa aaaatgagta aacaattttc taaaggggaa 480
 aaaatctctt cacctcctca caccaactat ttgcataatt cagtgcctt ttataaacgg 540
 tgccattgta taagca 556

<210> 8
 <211> 670
 <212> DNA
 <213> Homo sapiens

<400> 8
 cacogtcctc atcatgatcg tcttcgtcat ctgctgctgg gggccctact gcttctggt 60
 gctgctggcc gccgcccggc agggccagac catgcaggcc ccctogctcc tcagcgtggt 120
 ggccgtctgg ctgacctggg ccaatggggc catcaaccct gtcactctacg ccatccgcaa 180
 tcccaacatt tcgatgctcc tagggcgcaa ccgcgaggag ggctaccgga ctaggaatgt 240
 ggacgctttc ctgcccagcc agggcccggg tctgcaagcc agaagccgca gtcgccttcg 300
 aaacogctat gccaaaccggc tgggggcctg caacaggatg tcctcttcca acccgccag 360
 cggagtggca ggggacgtgg ccatgtgggc ccgcaaaaat ccagttgtac ttttctgccg 420
 agagggacca ccagagccgg tgacggcagt gaccaaacag cctaaatccg aagctgggga 480
 taccagcctc taagacggtt ggaatggcca gcttatgaag gcaaatttcc actcgcatta 540
 tttaatgatg gaagattctg ggggagagtt gtggatttca taaagccaaa catttaaagc 600
 tagagacggg ggaggcttac cactttcccc aaacaacata aaagacaatg tcccttcttt 660
 caaaaagtgc 670

<210> 9
 <211> 1860
 <212> DNA
 <213> Homo sapiens

<400> 9
 cgctcctgcg taaacacgcg gttccctcgg caacgctgga acccacgtca aaggctccgc 60
 caggtcccca gcgaccgcca cccctccggc cgagcccagc tccccgcggc ggccgctagc 120
 ccccgccccc gagccaccac tccgacctag cggccgcccgc ccccggtgcg ggatgaggag 180
 atccgcggcc gccactgggc cccatggagg agccgcagcc gccccgcca ccagcgagca 240

tggccttact gggcagccag cactccggcg cccctccgc ggccggccca cctggcgga 300
 cttctccgc ggccacggcg gccgtgctct ccttcagcac cgtggcgacc gcggcgctgg 360
 ggaacctgag cgacgcaagc ggaggcgga cagctgccgc tcccggtggc ggccgcttg 420
 gcgggtccgg ggccagcgcg gaggcgggg cgccggtgag gcggccgcta gcgacggagg 480
 cggcgccgct gctgtgcac ggagctgcag tggcgccca ggcgctcgtc ctctgctca 540
 tcttctgct gtctagcctt ggcaactgcg cgggtgatggg ggtgattgtg aagcaccggc 600
 agctccgac cgtaccaaac gccttcaccc tgtcgtgctc cctatcgat ctgctcacgg 660
 cgctgctctg cctgcccgc gccttcttg acctcttcac tccgccggg ggttcggcg 720
 ctgccgcgc cgccggggcc tggcgggct tctgcgcgc cagccgcttc ttcagctcgt 780
 gcttcggcat cgtgtccacg ctccagcgtg cgtcctcctc gttggaccgt tactgcgcta 840
 tcgtgcggc gcccggggag aagatcgcc gcccgccgc gctgcagctg ctggcgggcg 900
 cctggtgac gccctgggc ttctccttg cctgggagct gctcgggcg ccccggaac 960
 tcggcgggc gcagagcttc caccgctgc tctaccggac ctcccggaac ccccgcgac 1020
 tggcgcggc cttcagcgtg gggtggtg tggcctgcta cctgctgcc ttctgctca 1080
 tgtgctctg cactaccac atctgcaaga cgggtgcct gtcggacgtg cgcgtgcggc 1140
 cgggtaaac ctacgcgc gtgctgcgt tcttcagca ggtgcgcac gccaccaccg 1200
 tctcatcat gatcgtcttc gtcctctgct gctgggggc ctactgcttc ctggtgctgc 1260
 tggccgcgc ccggcaggc cagaccatgc agggccctc gctcctcagc gtggtggccg 1320
 tctggtgac ctgggccaat ggggccatca accctgtcat ctacgccatc cgcaatcca 1380
 acatttcgat gctcctagg cgcaaccgc agggaggcta ccggactagg aatgtggacg 1440
 ctttctgcc cagccaggc ccgggtctgc aagccagaag ccgcagtcgc cttcgaaacc 1500
 gctatgcaa ccggtgggg gcctgcaaca ggatgtcctc ttccaaccg gccagcggag 1560
 tggcagggga cgtggccatg tggggccgca aaaatccagt tgtacttttc tgccgagagg 1620
 gaccaccaga gccggtgac gcagtgacca aacagccta atccgaagct ggggatacca 1680
 gcctctaaga cggttggaat ggccagctta tgaaggcaa tttcactcg cattatttaa 1740
 tgatggaaga ttctggggga gagttgtgga tttcataaag ccaaacattt aaagctagag 1800
 acgggggagg cttaccactt tcccaaaaca acataaaaga caatgtcct tcttcaaag 1860

<210> 10
 <211> 630
 <212> DNA
 <213> Homo sapiens

<400> 10
 tctcaaaaaa taaataaaaa cactgtaca tcaacaaggc ccttggggga cagctggggc 60
 ataagtaggt gtcagcata catcagagca gtgtgcctgc cctgagctgc ttgggggtga 120

```

ccagcctggt gtccagaaat gcctgctgga gggagtcgtg gtacaggaaa ccttgtgctc 180
ttagaagggtc tctgagagg ccctgcaaag ccagagtcctc tcttagcagc tcagatcagt 240
gctatcaaag tatagctcgg ggattgctgc cagcatacaa acttttactg gtctgcagcg 300
agataagtac agaaattgaa agtaagcatt tagaaacttt tataacaatt ttacaagggtc 360
ttgtcaaatg ttattaaaac aaagctgagg ctggaatttc acctttttca tttcgttttt 420
ttcaatttaa acaaattgta gtaaaatata ggtaatatata atgtaccatt ttagccattt 480
ttgagcgtac aatttagtag cagtaagtgc tttcacaata ttgtgtaacc actagtatta 540
tatagtatat atttttaaaa ttttacagaa gtattaagtt agcagcagat taaacatttt 600
tttcttaa at tgagcttgag aagcgctggc 630

```

<210> 11
 <211> 683
 <212> DNA
 <213> Homo sapiens

```

<400> 11
agagagcaga ttgccctgtg taggtcaggt ctgggttctt tctagtccag agtagggaag 60
aaacaggaaa gagggctggt gttgaaggac cttcagccac gagaagggt gtgtaccatg 120
tagccctctg gggaggcaca aaaaggctca ccattttctg aaaatgacta gactgcagga 180
tccacgtgag tgtgactatt gcattcatga ccttatccac agggcctcac aagggtgcctg 240
acatgcagta ggctccagat gcatatttat tataaagtga atagtcctta agctgcaggg 300
tcccttctat ttgcattcta agaaatagtc acttttatgc ctaattttgt atttgagtt 360
ttataagttt tataagaggg tctcccaa atgtataaact tcaagcccca caaacctat 420
gtttgcctcc cataggcatg caataaatgt tcgtggatct aatgagtaac aagaaaaaga 480
aggaacaaaa ccctaaccct tccctaccc aaaccagtgg caaccgggga ggatcaaatt 540
caaccttgat cagtcagagg cagcattcct aaattattcc caagcagcaa tagacaatga 600
tttacctcaa ttaattcagc cagttaaaag cttagtctt acttgccaac cgaaggcttg 660
aaggcaaat gtgtttaagc ctc 683

```

<210> 12
 <211> 481
 <212> DNA
 <213> Homo sapiens

```

<400> 12
ttcaggcaga tgtcagttaa aaacttacct ctgcacactg caaaaactgt atagccctga 60
acagatactt ttcttgagca tagttccttt gtctctaaaag caggcataat tgccaatgtg 120
gggatgatat ttagaaatct gaactgatgt ttattctcta ggggtcttct catttgagct 180
gggattggag atgtctagtg tctcagagca gcaataagaa aacagaaacc tcttccagct 240

```

tctgacatcc aaatgtcaag ctcttaggag aagaatggaa agtcctcaag aaatgcaa 300
 agctttggca gaatagctga tgaagaccac ctctcccccc tccagaaagg cattggttcc 360
 ccattcatgg aaaaggggaat gtagagagag attagataat agtacatcca taaggttcct 420
 ggaatctgca tctgaggaag aggggcgtca gagacccag ctgttatcta taatccctcc 480
 t 481

<210> 13
 <211> 693
 <212> DNA
 <213> Homo sapiens

<400> 13
 gcactagggc aaagtcaaga catacgggtg tccagttcta gctttgcaac taactggtta 60
 tataatttta agttacagtc actctgcgcc agtttctca tttttaatag agtgggtag 120
 aactagataa atactttcat tttgtcaagc tctaaattct gacttcagga aaaaaccata 180
 aggcactgga ggtttattca taggtttttc tgctgacccc gtccctctct gtttcttcaa 240
 ccaccacaag acaatcaact tccctgattg gagattggaa cagggtgtgtt ctaattctaa 300
 atgcatcact taactattag ttccaactct ctggggcttc cttcaaatag gggaattaga 360
 ctggtctcca atctctttgt acagatgagt aactttattt acccaaagat ttagtattaa 420
 cagtcgggag caggaggag aatacttatg agacaacagc catttccaca gtggagagga 480
 atggtttgtt cccaatagaa gttaccagat ttcagtccca ttgccaaata gatattatga 540
 gcaaggaaga aatctatagt agtaacttaa gaccaccaga aagatcaaag cccagagggt 600
 gagggtatgg caataaacat tagacatatc tctaaccctc tttgtttga aatactcatt 660
 accctgtggt actgggaata cctgtgccta caa 693

<210> 14
 <211> 733
 <212> DNA
 <213> Homo sapiens

<400> 14
 ttctgccatc gcaaggggag ggaagagcac cttaaagggt tatgagaggt ttgactgacc 60
 aagggaggga acagaacaca ttcctttcca ttggctagga ctcggtcaca tggctttccc 120
 tcattattag tgaggcttg agaatcatc tatttgtgag cccaggaaga agagaaaaca 180
 aattgtggtg aacatttagc agtctctatg acaatagtct gtatgttgac tgcaaagggtg 240
 gatgaacaaa accaagcctc ctttaaagca atacaatctg gcagagtccc tgggttatca 300
 ttctgaacat agatgcttat tgttcaagag ttaagaaaat tagcatgact gcattocagt 360
 tctataaatt taatctttat tcagcatatt gtcattccca tgtcttaaaa aataaaataa 420
 aaaacaaaa acctagtaac tacgttttat atagcaagga acactcatat atatcacttc 480
 attgtatcct tacaacaatc ctgtgcagta tatgttttac tccctttctt ctatgttttg 540

tatataaaga aatgagcccc agggagttga atggcttgcc ccaactagtg aagctaaaac 600
 tccaatccag gtctttttat ttccaaatcc ataatctaca accatctgta gagagttata 660
 attaagagat atgaatggtc aggggccttt ccatttcagt gcaagtctgc ccagctccaa 720
 ctaccagcat ctg 733

<210> 15
 <211> 694
 <212> DNA
 <213> Homo sapiens

<400> 15
 aatcctgcat ttcccatgct ctggggtgag aaggaattag ctgggagcca attagcaatc 60
 ttgtcagaag caaatgaatt ttgaataaac tggatactta aactgaaatg agaccattga 120
 aaccagaaga gcctgagatc catcagttag aggaaataaa agaagtggca ttttccttgc 180
 catctgggtg cagtgtgagt gatttttata atcctaccac atttttatcc ctgcttcctt 240
 taaactgtag gaccaagga acctggctgt tttgttcaac atgatgtgac cccataccta 300
 accaggccag gcacaaaatt ggcctccaat aagtagtgga tcaaagtatg aatggataaa 360
 ctgaatgaat gaagccaaac ttgaatttct ccatagctta tccaaatggg aatggtaaaa 420
 atcataagct tttgagaaga gaacttatta agaagcccta catcagtcac gactggcatc 480
 attggttagt ttaccaat ttctccttcc cttcatcttc ctaatgcaac tctggtttgg 540
 gctgcagtat acccagttag aatacgccct cccagagtc tcatccagct ggagatgac 600
 aagtcaccag ttctagctaa taagttgcca gccaaagtat tcaggatgag acttccagaa 660
 aaagcattgt tttcctgata acaatggaca gacc 694

<210> 16
 <211> 674
 <212> DNA
 <213> Homo sapiens

<400> 16
 gactgttatt actgaaagtc attgctttta gactcttcca actacagagc aaggaagttt 60
 atgtgtatat agtaatctgt gaatatacac atacatacac atatttctat atgtaatcat 120
 ccatatttaa attaagtaga atatgagttc atactgatat ctccaatcct aatcagttac 180
 cacagggatt attccggcct ttttcccttg gaagtttgca actcctgctt caacagttag 240
 aaatctggct tccatattca ttgcttaat tgttcaattc cagtacacat aaatgggtggc 300
 ttcagaatta ataacttata cctccatggg aaataacttt attaaactaa gtacagcact 360
 tatgtatagt actttttgaa tttttagact tagagattcc tcttcttttc caaagttact 420
 taggtcagaa ccattttcca ttcttcagtg aagttgtctt atgtatttgt aatacagtta 480
 gattgttctg tcatatgggtg cattccatcc tgggatttcc tatctctttt ttttaacattt 540

gcatatatta agtttcattc ttttgtgctg tatcattcta tgggtttcaa ttaatgcata 600
 gtgtcatgaa tctgccacca taggagcatc atacagagta gtttcaccaa cttaaaaaat 660
 tccctatggt ttac 674

<210> 17
 <211> 645
 <212> DNA
 <213> Homo sapiens

<400> 17
 cgttccttcc tctgtgtcat aatggacatg atgatagttg gctcactcag taaacattct 60
 gtgtctggaa ggatttgatt tgtccttttc ttgaggcaac aattttgagg tgatttgaaa 120
 aatctttctt gaaaaattaa aaaatttttc taattaaaaa taatgcaagc tcattagaaa 180
 aaaattgaaa aataaataaa agcacaattt ttcttaacca cttaaagatg accattgtta 240
 gttttttttt ttttttggtg cttttttcog tttccaatct cttttctatt aaaacttctg 300
 aaatgtgatt gtagcaatga cgcataaggg gcccttgaca cattgagaaa tttataaata 360
 cgctggcttc ttgtcttgct tttgtcccca gcttaactgg gaactctttt tctatatctt 420
 tgaaactcca aatcctagat aattcttcaa ggtcaagctc caatgtcttg ctggattctt 480
 ctcagcagga attgatctat tttctctgta tttttgtgcc acaggatcta tgactctctt 540
 atggcaacta ccaccttctg ccttatatta cgatttttga atcttccaac aaagtctaata 600
 tttttttttt tcaaataag tctcgctata ttgcccaagc tggag 645

<210> 18
 <211> 707
 <212> DNA
 <213> Homo sapiens

<400> 18
 atgtcatggg aaatgcaaga atatgtgtcc agcatggaag ggaatcagta tggaagtctt 60
 ttgataaatt gtggcattta tctaatacat tgcctcaaaa ctttagacta cctgccatat 120
 acaaattaga ggtgaaaatt acttccatgt aatatacaag ccaacacaaa gaatcctatc 180
 ccagtttctt ggatggatag gcaagaatct gggtaagggt tattgtgcaa taatcctctt 240
 ctctcttcta taggccagga ttttaagttta cctcaaaaat ggaaaatttt ggctgggaaa 300
 attacatgtg ggaagacatc ttcagtggag attttagtaa ttacagtctc agctatgacc 360
 ctaccctttt tctactagat tctgccccat gttggccaga atccctagaa atcaattatg 420
 ttttgatcat catctatgcc ctgatgtttc tactgaacgt gatgtgaaac tccctgccga 480
 tgctggatcat cttattcagc tgagtcagcc actgtcaccg atgtctacct gctgaccctg 540
 gccttggcog acctgttctt ttccctgaca ttgcccatct tggtgcctc caagaatgaa 600
 tggctgggat ttttggcaca atctgtgccg ggtggtctag ctctgaagg aagtcaactt 660
 ctacgggggg tattctacta ctggcctgcc gcagcatggg actgtta 707

<210> 19
 <211> 680
 <212> DNA
 <213> Homo sapiens

<400> 19
 tatgatattt cagccatggg gctgaacatt tccaaacagc ataaatgcac catgtgtgta 60
 tgttttcctt tgggatgctg tgcttagagg gtagcagaca gggtgcaaag tgagaaggac 120
 ctggctctgc acccaacact gccagtattg aatcctgact ccatcatctg ggagctgtgc 180
 aacctaogca aggtacttgg cctcagtttc ctcatcatcc ccatggcatt tttgtgagaa 240
 ttaaattgagc tgaaaccttg aaaccccttc aaacagcagc tggcacagag gaagcacaca 300
 atcaatgtca gctgtactct tcctggcagt gtggagatcc cagctctgcc cctagctagt 360
 cacttctctt cttggaatct cagttccttc atctgggaaa tgggagcaga tgtgaaaagg 420
 ggcaggggtga gaatacatat gaaagtgtgt gctcctgggt catagcaggc acttaataat 480
 gatacacttt tccatcttct gccttcccca gggatgcatt gtgccatgta agagagagag 540
 cctccagggt tggcgagagt ttttgatcca ggctttttca ggtgtcaaag atgagctggg 600
 tgattctcca tagattttcc tttctaacag gtgacagttc tgtttcagaa atactgtgga 660
 tgttcaggtt tacagcacat 680

<210> 20
 <211> 479
 <212> DNA
 <213> Homo sapiens

<400> 20
 tttatgctca tgtagtctt tccaagaaga gaaattacag agtcaaattg tagaaatatt 60
 taaaaatctt tggcacacat aaacagtatc catataatct ataccatctt ttagatgagt 120
 tttaacacca aatgatagaa atctcagttt catacagatt tgggtgggctg gaaccaaata 180
 cttgcctgat aggctgtccc ctctcttttc ctactgtttc tgggaaaggc agttcctggt 240
 aagaactctc cctacggccc ctttcatctc actgttcctc agggcataga taagtgggtt 300
 gagcagtggg gttcccaatg tgtacaccag tgagatgaac tgatcttgct tggggttgta 360
 gctggagctg gggcacaggc acatgaaggc acagcagcca tactgcagca gcaccacagt 420
 gaggtgggaa gagcaggtgg agaaagcccg gtggcggcca gcagccgagt ggatcttga 479

<210> 21
 <211> 709
 <212> DNA
 <213> Homo sapiens

<400> 21
 ttttaagccac ccagtctgtg gtgttctgtt atggcagccc aagccagcta ctacagggtg 60
 ggacgagggg aggagcatgg cctctgctgg aagtgcaggc aatgatccc ccaggaacaa 120

tgatgggagc ttctgattgc tctcattatc tctgcaaagt aggaagaaag attcatcagc 180
 tgagcatgag gatggtagaa aacatctttg ggaaatttca gaagtgaagg aaggcataaa 240
 atagtcatct aaaaaaagca ggaaagggaa aagacagaga aatccagtat gagtcccagg 300
 actccaggaa gcatcaggac ccacttgaaa ttgccaatgc tgaatttaaa atgaggccag 360
 tctgtacaga agcacttctg gaatttgcta acagctaaat agagtagaat caatacttta 420
 gagaatacga gtaaccaaaag gaataaaatt aactgatcaa cttttgtggt ttttactatt 480
 aatattttct tcagtgtaaa tcatagctgc ctgaattcct gaaccctct tatataaatc 540
 taaaaagctc tggtttatca tggttgaaaa ttcattggcta acttatcagg caaactgtcc 600
 ctaaagcatt ttttgaatag ctttagtatc aagatggtag tgagtgtaca tttcatttcc 660
 ctgcttaaag gaaggcttag ttattttaaa ccaagtctta tttttatag 709

<210> 22
 <211> 517
 <212> DNA
 <213> Homo sapiens

<400> 22
 atttctggat ttatgcctcc cctgacccat tccaggattt accccaaacc ttccacactc 60
 tcttctaaca gggaaagtgc tgttatgaca caatagtact tattaagaca gatttacctt 120
 ctaagtctca ggacagcatt tcacaaccag aaataactgg tcacatgaag aaccaggagt 180
 ctggtagtag tgaaattcat tttccttctt gaaaaagtgg atcaaaggat tcaaacagca 240
 agtgggtgaat caatgaaaag tggtaaaatg gtgaggaaaa aatgttacta aaagatgacc 300
 tcaagattac tgggtgcatat gaattgcttt tttatatagg aaaatactgg ataatttctt 360
 attgtcatag tataattaga agcaatttca tgtgttcatt ttgccacatg agtttaaatg 420
 gaatagattt ggttccctct ctaacatgag ttcagtgtct gaacttgggc aaatttctaa 480
 acaattctga gcttcactac ctctgcttga aagttag 517

<210> 23
 <211> 695
 <212> DNA
 <213> Homo sapiens

<400> 23
 ctttggaaatt ttattctaag catcaatcaa gaggtatagt acgagaaagg tagaacatgt 60
 aattataaat tcaggattca ggaagtttat ttttctcttc tttttaattc tctcaaaatg 120
 atcttgattc ctgcaaagtg ttagtatatc tggtaagtaa gagtctatct cttttaaact 180
 tcatctgtat taaccagctt tatatgacca aaatgtcccc caaatttaaa tctttgcaca 240
 gtaaggcctt atatgtacac ctggcctcat ttcaaaagac taaagcagtt gttctcaaat 300
 tcagctgcac attaatataa actggaaaac tgtttaagct cctgatgaca aagccacatg 360

00196US1.ST25
 tgagactaat ttatgctgaa tcaactgggcc aaggacccag gtatcagcat tttttaaaac 420
 tatagaggaa taaccagggg tgagaaccac tgcacaaaat ggtaaatgca acttttattt 480
 aagttatttt ttttaataa ataatggttg aattgatact gatcttagta ccaagtcatt 540
 gcaatttttt cagacttaga gaattcatcc tggcattgag attattaaag aacctagaaa 600
 tccaagtgtt tttgtttata ttttcctgt aaatattaga gtatgctagt gctcatcctt 660
 atttgataat tttggaaaaa tatattaaaa cattt 695

<210> 24
 <211> 677
 <212> DNA
 <213> Homo sapiens

<400> 24
 attatcattt gaatgttgat attacatcat atacaaattg attgcaacat agttatttaa 60
 tgtaacattc tattttaaaa gataaattta tcagaatcat acattgctac agtagtctcc 120
 cttatccaca ggttcatttt ctatggtttc agttacctac tgtcaacaag gatccaacaa 180
 tattacatgg gaaaatcaca gaaataaaca gtttgtaagt ttaatttgt gcgctgttct 240
 gggcaacgtg ataaaatctc atgctgttcc tctctatctt gcctgaacat gaattatcct 300
 ttgtccagta tatccacact acatatgcta ccttccatt catcatttag tagctgtttt 360
 gattatctga tagaaaaaac acacagtata tatagagttt tttatggggc aagggaacac 420
 tttctctttg tcctctgaag attcactgaa aactcaactc acaagggcag actaatagga 480
 atgaaggtaa aaaaaaaaaa atattaacat caatggagat aactacagag tgattattcc 540
 attgccatca atggactaca gtggcttaaa tatcgttttg aggttacaaa aagagtggaa 600
 gtcttgggat cttggcaaaa caggttatgg gaagaagaga agagaaaccc tggtagcaa 660
 aggtcatctt gtgatgc 677

<210> 25
 <211> 361
 <212> DNA
 <213> Homo sapiens

<400> 25
 ttttttcccc ctgagtgttt ctctcatgct ttcctccaaa tggagatgga gaggtttcac 60
 ctcaactttc tctaactctc cctagttttt tggtttcttt tcctccacat ctaaaagtgt 120
 gcagaatgtc ctttttagcac atagaaaatc ttttcttgac cctgccacct acttaactaa 180
 aatccccacac ttttcttctt cttttaagat ttcctttata atggtgtgtg tcaatggcca 240
 catccacctt atccattcct tcttaaagtt ccagaaaaac ggttttgttt cctgttactt 300
 taatggaatt atttttccaa agatcaacag gactttccct caagcccaat ccagtcggta 360
 g 361

<210> 26
 <211> 459
 <212> DNA
 <213> Homo sapiens

<400> 26
 atacatgata aggtacatgg atccagggga aggatgaagg gcagtgtggg attgcttttg 60
 aattttctcca aactcgccca taaaagcaga caggacaaac taagataact aaacaaaaaa 120
 acccacagac aaaactatta caaaccccaa aagaagtgtg gtgggaacaa acatctgata 180
 gaatcagaca cattactggt gaccggacat aagccctggt aatgagaagc ttacatttag 240
 gagagtcaat taagtacacg ctatacacia cctaaagtgg taaatgctac cttgggttatt 300
 caacttcact gttacatgcc ttgaagtgtg gggtgactg gcctgaacca ttctggttgt 360
 gtttgattcc ttaggatgcc accaacaagt aacattgaga aataccagc tacttttcat 420
 tgttctccaa tggcagcaaa gtacaaatga tctctatga 459

<210> 27
 <211> 625
 <212> DNA
 <213> Homo sapiens

<400> 27
 tccaggcagt attctccatg acaatgagga aggtaagtct gcaacagaag aacaatggca 60
 gaaattttta gaaaagttta ccgcctggga ctatgactca ctttttggga gaaaatgtga 120
 ctaacccttt gtaagagctt gttgagagct cactttcctg ggaggagtcg ggagaagggg 180
 agcatcagct gacgaagagg tgaaggagggt acccaacaag aaaagcgtag aaggaccagg 240
 gatttggggt cgggtcttcc tcctgattcc aagggatggc ataagatatt gccaatgaa 300
 ggaagcgaag tagagccagc aaaggaagggt gaactgttgt ttcattagaa ataatatgtt 360
 gtgataatta tacaagtagc taattagtaa atttctttcc aacctcgaca ctccaaaaat 420
 ccctgtactt atatcccgaa ggctcttct tcccaagct ggaagacacg gtcactcatt 480
 agtcacccac tgacacagga gtaacagaga ctacaaatat tggacaggac ataagtgagg 540
 gtcaagcatc tggatgcaga tgcacagac gatgcaagtc ttcccagctc tcatggactt 600
 tgcgacagat gcacagagtg aggta 625

<210> 28
 <211> 601
 <212> DNA
 <213> Homo sapiens

<400> 28
 attaaatgcc tgaactccct tcagctctga aactctgtgg tgtattctct gaggacatta 60
 cctctctaag ggacccaaat taaacagctc acaccatcca tcatttttct gtctgagggt 120
 ttatttcctt aatcagattt gggtaaattt tcagcctctc tctgtctctt acttccaatc 180
 caataaaacc tgtatggatt tgttttgtat ttcattctaat gtcattattc attctaagag 240

tcactgcctg accattttccc tgcctatagc ataattagct attaaaaagc tacactggca 300
 tgggttttcaa acttgcattcc tctttttctg aggtggattg attctaaact gattaaaata 360
 tctcagaatt tccaatacaa ttttttaaat gcaacagatt ttcaagactg cctcatgact 420
 ctgccaagcc aagggaagtta gctgccaact ctctctgact gccaaaggaag ccaaataaat 480
 aatcctgatg gtgggttttaa aatgagaggc aagtgcccat ttcttaggtt gacagtgcc 540
 ccctacacat tgactttctcc agggtttgta agacaccaag ggtgatgttt cagattttcc 600
 c 601

<210> 29
 <211> 597
 <212> DNA
 <213> Homo sapiens

<400> 29
 tccacattct ttctaaagtt ctgagctttt ccatgggctt ccatggtagg gaaagcacat 60
 ggcttgggtg tgggtagagc aggtgcggcc atttatatgt atggttcttt gcaagtctgg 120
 catttgtaaa atgggtgatg cttgtattgt gtttatttat tcaatcatgt aatagaagat 180
 gcacataaga ttattttgaa aagtatgcct tccattttca tgctgagaat aatgcaggaa 240
 gttcagtgtg atgcagttat aataaaatag tagcaaaaca atattttgct ttaaattcatg 300
 gaattagcaa gtaaagacta attggaagcc aatcttttgc aaatttttta aatgtaagtt 360
 tatttggagg atatgacttg ttggcccaga gtacatataa agaacaaaag agtataatta 420
 acaacagttt caaatatgga cttaccaggc atcttgataa aatcagtatt gacatgtatg 480
 tgaatgccaa cattgtgttt ttccaattca atactatgtt atgccataaa actggtagca 540
 gttatgaaaa ttagaattgg ttaaaaactg ttgaaatctt taaatttttc ctgttta 597

<210> 30
 <211> 618
 <212> DNA
 <213> Homo sapiens

<400> 30
 tacgtgggtt tccctatcgt cctcttcattg agttctttgt gaaaacagaa agactgagtc 60
 tgccaataac cagcaagaga acaagataaa ataaataaaa ttaaccataa gactttaaca 120
 tatgacaaac aactggtaag gattttcaaa atcttttggg caactttgat ggtatttttc 180
 catacaatga actctaaaat atgaaaaacg tacatccata ttttagatat aaaagtctct 240
 tgcacaggcc agaaaatgaa actttaattt aagcaataaa attccccttt gtagactgca 300
 aatggagaac atgctatcta gcttcatttt tcttcaactt acataaaaaat gaaacaatgg 360
 ttaatgttct ggcgcatct ctaaacatat tcagtgaac aaaatttcct taaaaatgct 420
 aacagcttac aacaaataac attttatcct gttaattat ttagaaacaa aatcagttat 480

gctgagatat gtttgcattg gatttatata ctctgatcat agaaacaaat tattgacatc 540
 tgaatctgaa agctgcaaaa catgataaaa gacataataa aatcacagat ttgttattct 600
 ctcaggaact ttttctag 618

<210> 31
 <211> 655
 <212> DNA
 <213> Homo sapiens

<400> 31
 ggtgcccatg cttggtggtg ggatgtatga agctccttgc tctccagct gggcatcctg 60
 ccacttgctg agccaaataa ggaatgtggg gaagcagcag gccaccagcc agatgagggc 120
 cactgccttc caggcagccc catgggacat gaaggagagg tagcgagtg gatggatgac 180
 tgccaggtag gtgtgcagca caatggcggg gaaggacagg atgggtgctg tgcaggcggc 240
 gaagacagca tcagtggagaa tgccacagcc catggggccc agtcccagc caccaggct 300
 gctggaggag atgagcatgt ggaggagaat gtaggccagg tctgagagca ggatgttagc 360
 cgggagcagg tagtggggct cctgtcgcag ccgttggttc cgcaggatgg tcaccagcag 420
 cagggggctg acagccagtg tggctgcagc cagcaggctt gagggaagga aaagccagta 480
 cagcatggag ctgggcaccc tgaggcccc caggcccaag gaagtgttgc tggctgcttg 540
 gggcatgcag ggtgtcttgc tgatgagctg gatcagggcc ggccaagctg tagtgcccac 600
 agggcaaggt gccagctcat ccccatgct tcttggcagg gatggctggc tttgt 655

<210> 32
 <211> 697
 <212> DNA
 <213> Homo sapiens

<400> 32
 aacactgact tctctgaagc agttgtctaa aagaacctac accattttta tttagcaaaa 60
 aggcttttgt taaaagcagg ggatagcaga aagagctttg taaaaaatat gtcattgatt 120
 ttaggagttt ctaagagcaa gaaaacgttt cttaaataa ggaatgaagc aattagagtt 180
 ccataaaaat cacctaattg gccttccaaa aggcaaatgc taaagcccca gaaatcatca 240
 ctgaggaagt ctgaagtagg aagagacctt gttctagaaa gccgacaagg tagaaattaa 300
 aatggaacag gcccaacttg aaattccgag accaaaagag gagctgatga cattgggtggg 360
 agacagggtgt gggaataaag aatgttggtg gattctagag acattccagc gataacacag 420
 acaggacttt gtgactgact gtatggggca gctgcagggg taggagagga ggaacgatta 480
 agacatgatg aactgggcta tgagttggca gctccattta ctccagagaa cacaggaggt 540
 gaaaatcatg ggagacttga tgaaaacact ttgagaggca ccatggggat aaaagccaga 600
 aataaggtgg gaaatgggtg aagctattca ttctagaaaa gaggggtggg ggatgagcat 660
 aagttaacag gaaacaagtt aattttttta aagtgtc 697

<210> 33
 <211> 611
 <212> DNA
 <213> Homo sapiens

<400> 33
 tttcccagat aaattgtatg cacagtaact ggtgttgag tataccatag catatataca 60
 tccatttggc aactgcagg tgccagtggg acaacatacc agagtgtgag tcttcctgat 120
 ctttttcatt atgtcctcag ttatttacct tgtaataagc ttgtaacgt ctatgattgt 180
 ttttgagtca tcccaatgca gtcattgtaac aacaacatgt atttttaagt aaacttggg 240
 attttcctcc atacctgaat ctctagtatt cacataaatg aaaaatcaaa attaggataa 300
 gttagtgtca aacattaatg gattttttaca atgctaattg gtgttccttt ttaaattatt 360
 gctgcctaca gacacatagc tatagttcca tgcactttca accaccaatg ctgccaggct 420
 agtaaagcag ttaatgtata tttgggggta attatcagaa tcaccagaaa caattttttt 480
 aatttttaaa atattttatt tttccacaga ttattggggg acagatgctg tttgattaca 540
 taagttcttt actggtgatt tgagagattt ggggtgcacc aacatccgag cagtatacat 600
 tattocctat g 611

<210> 34
 <211> 602
 <212> DNA
 <213> Homo sapiens

<400> 34
 cgggttatat agagaaccac ttgaaatacc acctccttgg taacaccagc tccctccacc 60
 ccctgagctc acggtctctt ccctgtgaga tgcagcacca ggtaagggtca ttaacaacca 120
 ggttttagagt aaacagtgtc gggctgtatt totgatcctg cctttcccta actgggtgtc 180
 ctttggaag ttattaagtt acttcatctg tacaatgggt tacacttatg ctttttacat 240
 atggttggtg cgaagattga gtgatatgca taccaaaaat gctgagcaga acaccttgtc 300
 catatctttc ctctctgtta ttaaattggag gcctttaagg ttaagtaatt tgttattgtt 360
 gtggttaatt ttagtcctct gaattttaat ctagtacaaa ttgtgctgca tttggcacat 420
 ggtacatgtt catgaatatt gagtgttgta taaaggaatg aaaaatcaat tacatgaaaa 480
 gaaattccaa atcttacatt ttacaaacac agacacaaag aataactaaga ttttaactcag 540
 gggcaaaagt taagatttgg ccaccagcac gtggtgagct tccttgaaag tttgtttctg 600
 gc 602

<210> 35
 <211> 428
 <212> DNA
 <213> Homo sapiens

<400> 35
 attctaattgg cattaatcca tagcattatc tccatctctg ttttaaatat catgcatcct 60
 cattctatga ttcaatttaa aggaatcctt caaaaggatc aatctaaata aataacaagt 120
 tagctttcag gcaaacaaat aaatttgctt tgttttatat tcaccataaa tatttcactt 180
 aattactgag gtaccttggt caggaaacac aaaacaacat tataaattaa ttagcactgt 240
 ccctgctgac gtttttagtcc tgtggaatgc aaaagctaaa agtaaaaaaca ggccatgaag 300
 cccaaccaga gcacacatcg tatgcaaagc ataaagccca caaacatcat gggatcatto 360
 ctgggacatt ctgaatcacc aaaattttgt ctttaatcaa gtattgccct atttattttc 420
 aaattcaa 428

<210> 36
 <211> 643
 <212> DNA
 <213> Homo sapiens

<400> 36
 tttgggtcta gaatcccctt ggtttgggaa gcatccagaa ggagcttcca tccccatcca 60
 tttcttgctc acttcctcct ctctagcttt gttacatgt ctctcgatac ctagacagag 120
 gcagaggcat ggacttctgg ttctaactcat tcaagcctta cagctccttc aaggctccat 180
 tcagaattat ctttcctcgg ggagtctgct tctcctatct caggatttac tgactattct 240
 cttatctctt gtaacattta atatccact ccttagcatt aacttttaaa cttgctttct 300
 aatcctgagg tttgtgttcc tttgccttgt aaaattcttt gtaaatggcc agcccagtac 360
 gtagcccagt cccaagcacc acgtaggcaa ttgaaggagc tgggacaaaa agagtctttt 420
 gtttgaattt cttttactgc tctgagttta ctctgtatct gcacatgagt tttaatgttt 480
 tggggccatt gaactatttg agaactctaga agataatata cctcttttca gaaaaacaca 540
 tatgaatata cacacacaca tgccacctac acacacaatt ttgcatgtaa ttttaaggat 600
 tcattaacct tagcttacca gactgtaagt tcctttgcat att 643

<210> 37
 <211> 567
 <212> DNA
 <213> Homo sapiens

<400> 37
 gcaagttatc tgtatttatc cccctacaaa cacacactcc taacatacag tggtagagaga 60
 ggaacaacat aactgcagag gaagtaagtg agagacacaa agcagtcatt ggttcattgc 120
 tataatgaaa ttctoctaga caaatgctgc caggatctct tccctgggga taaggtctag 180
 ttatcttctt ggaagtgggt tccagctcac tattctctac tgtataatta cagtgactcc 240
 ctcatccatc ctcttgctt ctcatgctt aactttatcc tctagactcc aggctcctcc 300
 tctgagatgt tctcactttt ctgcaacaaa agctgagtct atttctcaat ctgtttgctg 360

00196US1.ST25

tccatagaaa atggaagggtt cagaggcttt tattcaattt tctcagtctc tttattgcaa 420
gctgggtccc atttacttat ataactcttt taaaaagttt ttgtgggctt tctatgtatc 480
agataataga ccacttcatt tgataaaaag ccacattctt tgttttccag acaagctttc 540
tatatttttg acaagtāagg ccactta 567

<210> 38
<211> 594
<212> DNA
<213> Homo sapiens

<400> 38
ttatgggtgtt tgtaagatct tattgcccac agagtctgtt ctgtccatct tatgatctct 60
gttttaacat taatgatgct cagttgtgtc tagaccctaa aagaagaagt ttgtatgact 120
ttccatgctg ttatggtcag gaatttagtt ttaagctttt ttggggcctc taagccacaa 180
gggatctgt tcagtcagtt cagtagaggg cttaggattt atcatcttta attcacattc 240
ccccattttg gtcaaaatat gccaaaagta gcatcaatag ccaagctctt atttcattcc 300
atattattac caggtgggtgt ggctatctat ctacagatata ttctgttctt caatgggacc 360
catatagcca agggacttat agccaaaaga cttacagcca attaaacatt ctaggacaaa 420
agggaatgga ggtgggaagg cattcattat tccttaaaaa ccttttgagc aatataagag 480
ccacaaacca aaagccaaaa agtaagctta caaaaccgat ttatctataa gttctatgtg 540
ttgggccatc ggctcttagg catctgtgag cccatctttt ttggaggatc tgaa 594

<210> 39
<211> 282
<212> DNA
<213> Homo sapiens

<400> 39
aaggcagagg gggccagcag ggcggttac agaaccatga tgtgttttta actggactca 60
cttctgccag tatctgctg actcttcagc ccatgtctct tttccttggt gtaatactaa 120
tgggggcatt aaggagccag agaagggggc tccgacgcca ctgcttgtag ctctggagtt 180
acatttagcg gcatttatat ttgtcatgt gaaattcgaa atcctcatcc aaaatgcaac 240
tgtgggggaa ctctcatagg aatttcagcc aattctggct cc 282

<210> 40
<211> 626
<212> DNA
<213> Homo sapiens

<400> 40
cccttcctcc ccagccatac cgtgaccac ccataagctg gcccccttag ctctggctca 60
cctggctcag acttagaggt ggaggattc ctgctgctca ggaaataagg actgctcttg 120
agctcctcac aggccccagg aatcccaaca aaagccaacc aaggctacct tcaggccttc 180

cagaaggggg tggtagtgtc ctcatcaggt tccccaaagt tagggagagg gcagctgggc 240
 ccagggccct tctccttgtg gctcaggatt tagccccact taccatgggtg cagccccagc 300
 cttccagcca acccagcatt agaggcagtg gtcctcttta atgccaggcc ctagtgtggct 360
 caggcataat ccagccagga aacctctcac ctttcacag caatggccac cagtgtgaaa 420
 acggaagccg acacagacat gccctgcacc aagccgctca tcttgcattg ggcatgtgcg 480
 aagggccacc ctgcaatgac agaggccccc acagagttag agatgccac gcacaaagag 540
 ccagagactg aaagccctcc aagccaggtc cctctgagc ttggatcttt cctccatgac 600
 ctgctaggtg ttatctggtc tctgct 626

<210> 41
 <211> 685
 <212> DNA
 <213> Homo sapiens

<400> 41
 aaactcccaa acgatagtaa cttaaataac ttaggtcttt aatactctct tcagtaaaag 60
 aattctagta gttggagagt ccaccatccc taggaatgta gttcttgtcc tcatggttca 120
 atatagctgc tgatgctcca gccattacag ccacattcca gacagcaaaa tatggaaaga 180
 gaatgaagag aagaagagcg tgcctaggag tcccatgtat tatttccata tatatttggg 240
 cagaacctag tcacagggcc actccatacg tatctgttag ctattgctac atagcaacca 300
 caaaatttcc atgtcataca acacatatct gcagggttggc taggggttcag ttcctccatg 360
 ctggtctcag acaggcagtt ctgcttcggg ttacagtggc tgagctgatt ccatttctca 420
 ctgcaggctc gtgtttcagt tgagtgaactg tcccatgtgc ctttcattct ccttgggttg 480
 atgaaaggaa gccacatctt tcaacagggc tagccacatc tgttcctcat ggcccaaaga 540
 gacaccaaag agcagataga aataggtgag acctcttaag gtctagactc aaaactggca 600
 cactgccacg tctgttcaca agctattagc caaagcatag atgcattacc aagccccaag 660
 tcaagggcaa gaagtacaat ccacc 685

<210> 42
 <211> 566
 <212> DNA
 <213> Homo sapiens

<400> 42
 acaataattt gttgtatatt ccaaaatagc tagtagtgta atgtttccaa tacaaagaaa 60
 agataaatgt ttgtgggtgat gcataattca agtaccctga tctgataatt gcacattgta 120
 tacatctatc aaaatatcag cagtacctcc aaaatatgct caattattgt ataagtacaa 180
 aaaaatttaa acaattataa tgtattattt atttctaaat ggtttattag atttaaaatt 240
 ttcttgggtg ttaatttttt catatattac cttataccct ttaacttcct aaaatatatt 300
 aggtcttcat atttttagagt aaaattctga aaatcctttg agtatctgat ttacaatct 360

tttcttccac tgattttccc ttagcaatgg cctgtttaaa gtgttgat gatgttactg 420
 agaaatgggc tggctacctg atgcacatag aagccaatac tatggcagtg gttttctaga 480
 aaagaaaagg ctttactgtg agtctactgg caaggagaca ggtggcaaca ctcaaactctg 540
 tctccctgaa ctgaggatgg tgggggt 566

<210> 43
 <211> 578
 <212> DNA
 <213> Homo sapiens

<400> 43
 cctcttactt gggccccgtt cactagtcct tcagccaaac tgcctcacat gctattccca 60
 gtatgaaaat cttgccattc cttttatctt ttttctcttc tctcatttac agccctgtgc 120
 tagtttcttc attcccttca agttctggcc aaactttatt tacctcttga ctgaccactc 180
 catctaaaat agtactcatc actgtgtatc cctcaacac actttatagg tcatggccat 240
 cacctgataa tgtgttatgt attttttggg ttacttggtg tgtagttca ttcttgcat 300
 gctgtaaaga aattcctgag actgggtaat ttataaagaa aagaggttta attgactcac 360
 agttctgcag gctgtatggg aagcatgttg ctggcatctg cttggcttct ggggaggact 420
 caggaaactt acaatcatgg ggaaggtgac gggggagcag gcacatctga catagcagga 480
 gcagcaagtg agcaaagggg gacgtgccac acacttctaa gtaaccagac ctcatgagaa 540
 ctactatca tgagaacagt accaggggat ggtgctag 578

<210> 44
 <211> 684
 <212> DNA
 <213> Homo sapiens

<400> 44
 agtataacaa ttcactgctt tacatctcta tattttgctt atctcaagta tccactttgt 60
 ctggatatagt gtgctcattc cacagttttt ggctgtcctg ggaacaacaa tctagtgcaa 120
 ctccagcaat gtgagttata gtgcaaagt caaaccagag cagcatcacc atctagaggt 180
 caaaatgata actgcaaact ttctcacctt tatgagcctt ccgtattctg tatacatagc 240
 agtttatgtg aatgtacaga aaataatgtt tgctattggt ttctctccag ttgggtttcc 300
 agaaagagat catggcataa agcaggaacc acctgtattt acagatggca tagggaagca 360
 tacatgcag agccatatat cagcagcact acagcatgtt tcaaccaaag atgagcctcc 420
 cacatgtcag acaaaccacc tacattggga ccacagcagt gacagtgttt ttagcacat 480
 tcttgataat gaaatctatg ttgaactcaa catgaatggc ttttcctttc tcttggcagt 540
 caacagccta caccattctg catttgactg tttagtttat tctccctct ggaaaggcat 600
 gactatggaa acagagtaga ggatattttg gggatttatg aaactattaa tataatttac 660

tctcattgct gtgcttttcta caaa

684

<210> 45
 <211> 693
 <212> DNA
 <213> Homo sapiens

<400> 45
 tcagcttatac tggcaatag cttttcgctc tgttgcatatc cttgagcata tgcatacagct 60
 acaatgttta taggtagctg tatggtgttt gacacagcac atggcgtagc tttaaacaac 120
 ttatagcact gggatttggg tctgaattta tgttgccctg tcaaagtctc ctctttgtaa 180
 catggtagcc ttttaaatat taggcagcta cctgcaacac tgggcattca gactaaccca 240
 tcaggcttat ggcatactgc tcttctcgtt cctctctctg gtgttggtac atcatgttag 300
 gtttatgcag tagacgtaga taggaagcaa gccaatggc tacagggtat tgaaagtcaa 360
 ttgctgagaa tgataaaga caaggatagc cttctctgca aagaagtgtc aagaagattc 420
 taaacgtata caaggatctc aagagaaaca gtccagata gcaacactat tcagtcttag 480
 actatggctg atactataca cttctccagc tctctgctc ctcagagcag aaaacagaag 540
 attttgaaat gagcaccacc ccagctcctg aatacaatgg tacctttcat ctatttctgg 600
 tgacttttat tttcttttgt tgctggatcc cctacataat tgtaagcata tcgcaggcaa 660
 gcacaatggt aaacagtggg tggacgcttc ctc 693

<210> 46
 <211> 677
 <212> DNA
 <213> Homo sapiens

<400> 46
 atagaacttg attatattgg tatttttatt tcaaattttc aatttttggg atggcagaat 60
 gttgctattg aaaagtgtct taaaggctac cactgtaacc ccttcattgt gcttgagacc 120
 tgctcagctc cttaaattta caggggacgg atctgagaaa ctgactcaa gttgtaacct 180
 cttgcttagt tttctttcta gggagatata cgtctctcca aacctgtcga aatctaaatt 240
 tattacctct tacctaatac ttggtcccct gtggacttca cttcactgtt tgtgctaata 300
 gccttttcat caccatcttg actttggatt ctgagcactc acctacttcc ccattttctg 360
 tgacccttac attcctcctg tcagtcacta tgtctgattt attgttctcc cctatctttt 420
 gccctttgca aatcctcaag ccctcattct ggttcagacc tttaaaggc tgagttactg 480
 gagtatagtg ttaccctaaag tgagttgttc cataaaaaat tagtaagttg gaaaaaaaaa 540
 caaaaaacaa aaaaataccc taccataaaa gttggtaaat gttcctgtaa aaagggttcc 600
 ttggccagggt acatgttaga atagctggtt aagtttcttt gcagaaagac ttctcctggc 660
 cttcatttgt gactgtg 677

<210> 47
 <211> 729
 <212> DNA
 <213> Homo sapiens

<400> 47
 gcaattaagt tttgta~~ct~~gt atggacagtg tgaaaaacat tatggaaaaa caacttgaaa 60
 gaaaatgtga cagaatttct cctaacaatg tcattgcttc aaccagctac aaattttcaa 120
 cctagtttct ttcttttgct gtttcttctt ttgtctttga tacaatcata cagcctctct 180
 tccttgaaga gataataaaa gactaacagt taaaagatct ggaagactca tattcttttc 240
 tttttcactg gctacggttt tgaaaagagg ctgttggtt ttgatttttt cttttgggtt 300
 cttttacatg cccaattcaa acagggtctgc tctcaaagaa aacaaatcaa aattgtcaag 360
 acctgtgaag catgaaaaat aaattgcttt ttccaactcc aaaaagcacc agaaaagcat 420
 taattttgat cttttataaa cctctatccc ctatcctcta atctatagat ttcacagaat 480
 gtttatatat tcttctgtat aatacaggag atcaaacctt attatgaata aattgaattg 540
 aacctgtaat acaactaata tttaaactag tgttattttg gagttcaact agacacatat 600
 aaaacatttc aagtgagatg acacaaattc ctggggctgc cagtataaaa taaacagtcc 660
 agtaagctgc atctaccatg ccgttaaggg actctgtcct tttagctggt gggagcacag 720
 gcttcataa 729

<210> 48
 <211> 595
 <212> DNA
 <213> Homo sapiens

<400> 48
 tcctgagaag acctgcagca cagggtaaaa tatgcaaggg agggccatat aacttttatc 60
 tttacttaat ttattttaat ttactaattt ttaagtatta acctattttg tttttattaa 120
 atctctgttg ttgcacagaa ttcaaattgc agcaaaaatc attcagggtc aaacactgga 180
 aaaatctctt aattctaagg tacatgacac aatggactca aaaacagttg ctgagtcctt 240
 ttcactggag aaatttaaag aaagggtata gaaaagtgtt gaccaattcc acccaatcct 300
 gcatcccaa ttccaatctc aaggaccagt ttccatctga tctctctcca cctacagatg 360
 gtggtcctga atctocaaat caacaaacca aaaactgaat ccatcatctt ctcacacctg 420
 gtttttctct ccaactccct cttttctgtg acctgcccc taacottacc aggaatccag 480
 cccccaaagc aggttggtgact cctccctctg caatggacac cagggattca ggtcctgttg 540
 ctggctccaa aatgccocaca atgccctgtt ctcccaaatc agcacattca acagt 595

<210> 49
 <211> 710
 <212> DNA
 <213> Homo sapiens

```

<400> 49
tttgacttaa ccctttgtag ccagagtaat aaatccaaac tcagcaagta tgggctggac 60
cccagtagct ctgtggttgc cacttttttg cccatattga accgacgtcc ccttggcatc 120
taccagggac tcctcagggg gagtgtggga atgatggggg aagactcgtc actcttttgt 180
agagcgtggg gcagatgata gcagagacct tccagggccc agggctgggg tcttgtcttc 240
cttgatgtg gtctagcgtt gctccagatg gtgggtttgt ggcaggtggg gcagaagcag 300
atgatgcagt tgaggcgggt ctctggtaga gagtgatgtc aaagatgagc actcctttta 360
tcccctgact cttctgagga tggctgcctc cttggtgagc cacttggagg tctcaggccg 420
atcatgcggg atggtggccc agatgaggaa ggggatccaa ggcggtggcc ttcccagatg 480
cactgggccc cagcccttct tcctagcttc ggctgattac tgtgggcttc agcaaccagg 540
gctacctgt aggtctccac atttgaagc accacagaac ccagtgcac tttgtgcact 600
caaatcgccc ttgatccagg ggtattttct cattcagaac acactttgaa aggcggccat 660
tccccttctg gagaaagcct ggagaatcta cagtgccctt aattacagtg 710

```

```

<210> 50
<211> 550
<212> DNA
<213> Homo sapiens

```

```

<400> 50
agatgcccag acaccttcac ttcagcagac aaggggcaga gtcctggaaa atctaggcag 60
ggaagacttg cgcctctaag agtaaaaggc ctcccagaga ggacatggat gaaaggagga 120
ccaccttcca atgccactct ccaaagcagg aaacatccaa ataaaggatg ttgattttca 180
ggaccccatc cttctatgag tgcttacaca actggtatat cctctcccg tcttctctct 240
ggtagccaag accttatacc agtttgagta tcctttatcc aaaatgcttg gggtcagaag 300
tgttttgaat ttcagatatt tttaaatttt ggaatattta tatcatacct cttggttgaa 360
ccttccagat acaaaaatct ggagtccagt gagtatttcc tttgagtgtc atgtcagtgc 420
tcaaaaagtt ttagattttg gagcgtttca gatttcaggt ttttgaaatt ggaatactca 480
acctgtactc tctgtccttg ttctacctct accagaccct ccccccacagg aatgaattta 540
gatctgaaaa 550

```

```

<210> 51
<211> 747
<212> DNA
<213> Homo sapiens

```

```

<400> 51
tcatcctccg ctgtctatth tgagctgtga gtttatccac aaaggaacag agctgaaatg 60
aaacaatttc accacagtaa cttgttaatc gggcatcctt taagtatgct ggatttaaca 120
ctggaagtgc ttttgaagac tctgaaagtt ttctttaatc gtcattgagat ttttccaaac 180

```

```

                                00196US1.ST25
taagttcatg atatggattt ttttactgt atctagctta agtcacattt caattcaaat 240
ctaaacctaa actgatggag ctggagctag tgacttcagg caattggcat cttttcgctg 300
aatacaaaaca tcctatttaa aagaccaaac acatgactcc attcaaaaat taaaacagtc 360
atgtgtagtg aaacagcaag aacacgggtct gagaaacgtg tccttgcaca cacagcgtga 420
atgcactcac gcaagcctag acggtgcggc tgccgcacac caggccctgt ggtacagcct 480
gtcaattcca ggccccaagc ctgcatacca tgttgctgtg cgggacgtg ccggcggctg 540
tagcacaatg ctaagtatct gtgtatctca acacagaaga ggtagagtaa agtacagtat 600
tatgatcgta cgggacgcgt gttgtacaca cagtctatca ttgatggaag catcgttata 660
tggcacatta ctgcactgta aaaagacacc aaacttcggc cggcgagtg gctcatgcct 720
gtaatcccag cactttggga ggctgag 747

```

<210> 52
 <211> 695
 <212> DNA
 <213> Homo sapiens

```

<400> 52
ttcttccttt tcctttcatt atcattttct ttttgtctca aaataatgaa aaatgcataa 60
gggtctgtag agagaagaaa atgtccttgc ccatgaactt cttgcaggta tttatcttgc 120
ttctttatct tactaaaaat agaattgaaa gtttttcatt ttttgTTTTT caattttaga 180
ggatacaatg gagattcagg aacgaataga aaatagtttt aagtctttac tagaccagtt 240
aaaaggtaag ttttcctact gtagattcct gtatttgtat ctggttgtat ggcaatagct 300
tcgaagttct tccccctatt cccaagcca atcaccaga gataagtaag tagttttaac 360
actttggagt caatactcct agatgccacc taaacacata tgtgtgtgaa tgaaaataca 420
gataaaaagt aatcttttaa cataggaaat ggtgtaatcc atgctTTTTT gactttaatt 480
tttttgttat tttggatacc tttccatgtc agttatatat accccattta ttttcaagac 540
tgcgtaatat tctatagtat tgtattaaca ttttttatgt tatcgcaatt ggtgacatat 600
tatgtatatg agttatttct tctactgatg ctgaaatgaa tatcttggga caaattgtta 660
gggtatttat ttgagtcctt ccttgggatt aaatt 695

```

<210> 53
 <211> 735
 <212> DNA
 <213> Homo sapiens

```

<400> 53
cttttgagga ttaaaaattc ctgcttactg tcgttataac acggggatta ataagcacct 60
tactggaatc tctcacctac cataatttta gtatgctatg tgagggaatg aacagtctca 120
cacatttaat aatgactact catataatgc ttttaattgg taatgaccta tatgaaacat 180
gatatagaaa acacattaca gcttctcaaa tgaccctat aagttaacca attgcttagg 240

```


tttctgacaa atttgaatct ggcccatgc acctttgctg ggccccacaa aacaaggagg 300
 tagattatct atgaaggcca accactctgg caatatcacc attaaatata aagctcatct 360
 gccccatagc tcttccatct tcagggtccag gactctggat tggaatgacc tacctccaca 420
 ttcagttctg taagtcatta ggcattcatcc aagatggtag atgatgaata aatggacaat 480
 gacttaagct ttttttactc tctcatccat tccaatgctt tcttccctgg tctttgctca 540
 ttatttccat gttatttaata atatatctgg aagaattcat ggcagtata acaataatgg 600
 ctacaatttt ttattaccta tgtatgccag gcattgtgct aagtgttca ggtataagat 660
 cttgtaaggg attggttaca ttttacagat ggtaagactg ggattcagat gttagttgcc 720
 tgtttaagtc aataa 735

<210> 54
 <211> 427
 <212> DNA
 <213> Homo sapiens

<400> 54
 ctcttctccc taggtggttt gctggcaatc tttggcattc cttagcttgt ggaagtatca 60
 ctccatctct gtcctgattt ctacatgggtg ttcttccctgt gtgcatgtct gtctccaaat 120
 ttccccattt tataaggaca cagtcatact ggattcgggc tcattctaaa gacctcattt 180
 aatttaattc cataaagacc ctatctccaa ataatgtcac attctgtggt actggggggtt 240
 atgacttaaa catataaatt ttagggagac aaatttgaac ctctaacagt actgaacatc 300
 caggatggaa gaacatggta ttaggttgag ccaaacacag ttgcttacgt tttggttttc 360
 ctcaccagga caagaaaccc ccagtgcagg 'aaaattggag acatggaaaa cagggcttaa 420
 gtaaaca 427

<210> 55
 <211> 713
 <212> DNA
 <213> Homo sapiens

<400> 55
 ttattatact caacactgct aggaagaat cagtgtggtt gaagatatat atatatatat 60
 ttgcttgtgt atttgtgtgt gagagacaca catagaaaaa aagagagaga gaaatatatt 120
 ggttgacact ggcttctttg aaaaaaggca gtttagtaac aatggccttt actagacaga 180
 catgttagaa ggcagcagga gaaagggaat gtggtatcag atattttctg taaaagggtt 240
 gttattaata ttcatgtggc aaattgtagc tgatgtcaaa gtagttataa agcaagggga 300
 acacaattct ttacagcaa tgttgaggtc taagaaacat aaaacaaata cctggtaagt 360
 accatgcata tatacatata taaacaatca ataactcaca aaacattcac atatttgcaa 420
 cactgctttt cagtttatgc agtttatttt ttgttctttt taagcttttt attatagtga 480

00196US1.ST25

atgtcttata tttcattaaa agttttgata ttatatgtga aacaacagtt ctgataaagc 540
 aatatctaga taaaggctat tacttacctt tctcaaattg atagattttc tccttgtaac 600
 aagctctgat ataaaatatg ataatttggt gaaaactttt acacattcaa aactaaatta 660
 tcatatatatt aatgagactt tgggtgtgta tgtgtgagtg tgtgtctgtg tgt 713

<210> 56
 <211> 607
 <212> DNA
 <213> Homo sapiens

<400> 56
 aaaacttggt tttttaagc aaacacagaa acaatgtaat ataggtctta ttacatatgt 60
 aggaaataaa aataatatgt atgacgacaa cagtagtcta aaattcagga gacagagaat 120
 ggaagtacat tgttgcaagg ttttctaata cacatgtaca aagtggata atgttacttg 180
 aaagataact gtgataagtt aaagacgtaa tcaatgacac tatatcaacc actaaaataa 240
 tacaacaag gatatacgaa atatttttaa aggtataatt aacccaaaag aaagcataga 300
 ggaaaaaggg aacaaagaat aatagatgga ataaacagaa aaaactagcc agctggtaaa 360
 tttaaaaccg atcatatata tattcacatt aaatacaaaa agtttaaaaca cttcaaagtc 420
 aagtcagagg tgtcatattg gataaaaaga aagactcaac tatatgttac ctataaggaa 480
 tgcactttta atatacaaac atattaaaaat aaaaagatga aaagttatat acaatgttaa 540
 tactcatcaa aataaagcta atgaggctat attcatatta aaaagtaggt tttaaagcaa 600
 agattac 607

<210> 57
 <211> 746
 <212> DNA
 <213> Homo sapiens

<400> 57
 tcaagtccat gcttttacgg aaagacccca gttcctgcct cttctatata tttatctacc 60
 ttgtggtgaa gagcatgtgt gtgcaacacc ttgacctgaa atggtaggt ttggcattaa 120
 tgaattgtgg gtccattgaa aagaaatctc ctcttgtttc tcgtgttatg gacagttcaa 180
 ggtttgccct agaactaact tcaaggaaaa gtagcagaat cgtaggaagg gacaatcttg 240
 ccttcagtcc caccctctgt tccgggcagg tctgggtggc tatcttcttt cgggggcttt 300
 tccttgcaaga agaacttctt cagcatgtcc tggatttcct tcttaatggt cttgtgcatg 360
 tagccataga cataggggtg gatgcagcac tgcaggaaga aaagccagat gattatggtg 420
 atcaccact ggggtacctg ggtttcgaca tccaccaca cggccaggac tgctaaaaag 480
 cagtagggcc ccaggatag cacataggag aaaatgatga tgaagatcac tttagcagct 540
 ttgactggt agcacctggg cagaggaggg ttgctgttgc tgttacgacg actgggtggg 600
 aggtctctcg ggatgttcac tgcctcgacg tcctctcac tgaattgat gtcgtcttca 660

ccaaactcca tgtcatcttc acccaagtca atgctgcact ggttgacctc tgtgcgaccc 720
 ttgtctgcct tcatgctgtt ctcctc 746

<210> 58 -
 <211> 638
 <212> DNA
 <213> Homo sapiens

<400> 58
 agtggaaga ccacacctag gaaccgactc tagctcttac caccctgtaa gcctgaggct 60
 cagttgctgt ccctggagaa cagaaaacat aatcatggct attctgaggg tcaggggcaa 120
 gtgctttgca agtgggattg tgggtggcag tgggagggat tctggggttc actgtcatgc 180
 tagttgtgta actgggcaat gcaaccgtgt aagtgtcagg aaaccctcaa taagactgag 240
 ccagaggcca ataagaagcc agcatttaca tgatgttctt ttcttttttg taactaggaa 300
 atttcgattt gcacactgat ttggcccacc attcctggag agatctcgtg ggatgtctct 360
 tttgttactt tgaacttctt ggtgccagga ctggtcattg tgatcagtta ctccaaaatt 420
 ttacaggtat gttttctgca agtgctgcca ctgaacttca cccaggcttg gggttatttc 480
 tgctagaatc ttagaatttg gggtcggaga acacctaaga gttcacgcca gctcaatctt 540
 gattcactgc ccaggtctac aacactgagg aaggagagga tttttttaga agttatatct 600
 ttgtgattat gttttttgct catcactaaa gtaatact 638

<210> 59
 <211> 216
 <212> PRT
 <213> Homo sapiens

<400> 59
 Asp Ala Phe Leu Phe Pro Cys Pro Glu His Gly Ser Val Met Thr Ser
 1 5 10 15
 Gly Ser Cys Lys Glu Ala Gly Leu Arg Phe Phe Gln Ala Trp Gly Glu
 20 25 30
 Val Gly Glu Glu Cys Val Leu Met Arg Arg Ala Gly Cys Ala Gly Ala
 35 40 45
 Glu Ser Ser Thr Ser Leu Gly Ser Arg Cys Pro Thr Ser Pro Ser Leu
 50 55 60
 Gln Pro Ala Leu Pro Lys Gly Ala Arg Ala Trp Pro Pro Leu Asp Met
 65 70 75 80
 Ala Ser Gln Pro Phe Gly Lys Cys Gly Arg Pro Cys Cys Arg Ala Pro
 85 90 95
 Val Thr Val Ser Val Trp Val Trp His Gly Trp Cys Ser Pro Ala Gln
 100 105 110
 Asn Pro Ala Cys Asn Ser Thr Gln Ser His Ile Pro Gly Gly Gln Ala
 115 120 125

Leu Leu Leu Cys Ser Gln Met Pro Pro Ala Gln Lys Glu Asp Thr Pro
130 135 140

Ser Ser Ser Ala Glu Ala Ser Leu Thr Glu Gly Gly Cys Val Lys Ala
145 150 155 160

Ser Glu Ala Glu Leu Pro Ala Ala His His Gln Asp Ala Leu Glu Ala
165 170 175

Arg Ser Trp Ile Gly Ser Gly Cys Thr Glu Pro Ser Leu Pro Arg Asn
180 185 190

Thr Gly Asn Ala Lys Cys Ala Gly Gln Ala Val Gly Glu Gly Gly Met
195 200 205

Ser Leu His Val Cys Ala His Cys
210 215

<210> 60

<211> 204

<212> PRT

<213> Homo sapiens

<400> 60

Leu Glu Lys Gly Thr Lys Ser Gly Ser Val Phe Ser Ala Phe Phe Phe
1 5 10 15

Phe Phe Gln Ile Leu Val Val Ile Ile Gln Leu Phe Phe Leu Cys Met
20 25 30

Asp Phe Val Val Leu Arg Ala Ile Tyr Arg Ser Arg Val Gln Leu Leu
35 40 45

Lys Val Ile Tyr Ser Gln Phe Cys Ile Lys Pro Ile Ile Tyr Lys Cys
50 55 60

Ile Ser Ile Gln Tyr Arg Pro Gln Arg His Lys Ile Phe Phe Ser Leu
65 70 75 80

Leu Ser Cys Cys Pro Thr Asn Val Cys Arg Ile Tyr Gln Asn Ser Ile
85 90 95

Arg Lys Leu Leu Val Tyr Ala Leu Leu Ala Val Leu Leu Leu Ala Phe
100 105 110

Leu Phe Arg Val Val Glu Ile His Ser Phe Ile Asp Ile Lys Gly Thr
115 120 125

Val Lys Met Ser Leu Pro Val Asn Ile Asn Arg Leu Val Ile Leu Gly
130 135 140

Leu Gln Leu Asp Leu Leu Ile Cys Cys Ser Cys His Met Ser Thr Asn
145 150 155 160

Leu Ile Cys Ser Pro Phe Gln Lys Leu Asn Tyr Leu His Phe Phe Gly
165 170 175

Gly Ala Leu Val Trp Lys Val Arg Glu Ile Phe Thr Phe Thr Leu Phe
180 185 190

Phe His Phe Phe Leu Lys Thr Ser Ile Pro Pro Leu
195 200

<210> 61
 <211> 96
 <212> PRT
 <213> Homo sapiens

<400> 61

Val Glu His Ser Trp Pro Cys Ile Gln Tyr Ile Ser Trp Val Arg Pro
 1 5 10 15
 Gly Val Pro Val Ser Ile Ser Val Asp Leu Leu Ser Met Leu Pro Val
 20 25 30
 Ser Thr Trp Val Val Pro Trp Gln Glu Arg Cys Ile Cys Val Leu Thr
 35 40 45
 Glu Val Pro Tyr Arg Cys His Phe His Cys Gly Ser Ser Asp Pro Gly
 50 55 60
 Lys Asp Ser Phe Gln Gly Pro Gln Val Gly Ser Gly Gly Gly Gly Ser
 65 70 75 80
 Gln Thr Pro Asp Pro Val Thr Pro Ser Arg Pro Val Leu Glu Gly Pro
 85 90 95

<210> 62
 <211> 213
 <212> PRT
 <213> Homo sapiens

<400> 62

His Gln Ile Leu Leu Cys Cys Leu Arg Leu Gln His Ile Ser Met Ala
 1 5 10 15
 Ser Ser Leu Gly Met Val Thr Val Ala Glu Leu Gly Gly Phe Val Leu
 20 25 30
 Pro Ile Ile Ile Ile Thr Tyr Phe Thr Trp Lys Thr Arg Lys Ser Leu
 35 40 45
 Trp Glu Phe Gln Val Pro Pro Arg Asn Thr Lys Glu Arg Lys Lys Ala
 50 55 60
 Leu Arg Met Val Leu Met Cys Glu Val Val Phe Ile Val Cys Phe Thr
 65 70 75 80
 Pro Tyr His Leu Asn Phe Pro Phe Phe Met Met Val Lys Glu His Val
 85 90 95
 Phe Leu Asn Cys Ser Phe Ile Lys Ile Ile Leu Cys Phe His Ile Ile
 100 105 110
 Ser Leu Cys Leu Ala Asn Leu Asn Cys Cys Leu Asp Pro Val Val Tyr
 115 120 125
 Tyr Phe Met Thr Ser Lys Phe His Asp Gln Phe Ser Asp His Gly Ser
 130 135 140
 Leu Val Leu Gln Ser Cys Met Arg Cys Asn Asn Ser Thr Leu Glu Ile
 145 150 155 160
 His Gln Arg Lys Gly Gly Ser Ser Asn Tyr Leu Ser Met Phe Glu Arg
 165 170 175

Phe Gln Asp Asn Ile Ile Lys Leu Thr Arg Lys Ile Asp Met Leu Tyr
180 185 190

Cys Ile Tyr Val Thr Leu Lys Ile Phe Leu Phe Phe Phe Ser Phe Phe
195 200 205

Leu Leu Tyr Phe Lys
210

<210> 63
<211> 197
<212> PRT
<213> Homo sapiens

<400> 63

Cys Tyr Cys Ser Cys Ile Leu Leu Ser Val Cys Leu Leu Cys Pro Lys
1 5 10 15

His Arg Leu Phe Gln Lys His Phe Leu Leu Ser Pro Phe Ser Leu Ala
20 25 30

Glu Ser His Phe Ser Val Ser Ser His Ile Ser Tyr Leu Phe Leu Leu
35 40 45

Lys Thr Arg His Phe Arg Cys Val Val Ala Val Gln Ile Leu Ile Leu
50 55 60

Ser Pro Arg Ser Cys Cys Leu Ser Tyr Leu Tyr Met Cys Leu Val Thr
65 70 75 80

Trp Leu Asp Tyr Phe Asn Asn Val Tyr Phe Pro Val Val Tyr Thr Ile
85 90 95

Phe Tyr Thr Asn Val Thr Phe Pro Ile Val Gln Pro Trp Ala Trp Thr
100 105 110

Glu Leu Ser Trp Asp Asp Ser Asn Phe Gly Ser Leu Leu Ser Leu Ser
115 120 125

Leu Met Ser Leu Leu Ser Tyr Leu His Leu Leu Val Ser His Leu Ala
130 135 140

Phe Asp Phe His Leu Phe Asp His Cys Leu Thr Val Phe Gly Ser Ala
145 150 155 160

Leu Arg His Lys Val Phe His Ser Leu Ile Leu Asn Ser Asp Ser Tyr
165 170 175

Lys Ser Gly Leu Gly Gln Ser Leu Arg Phe Val Leu Thr Leu Gly Gly
180 185 190

Leu Lys Cys Phe Pro
195

<210> 64
<211> 132
<212> PRT
<213> Homo sapiens

<400> 64

Pro His Ile Pro Phe Pro Ser Asn Pro Gly Asn Pro Lys Leu Phe Leu
1 5 10 15

00196US1.ST25

Thr Ala Ser Phe Gly Ile Ser Ser Phe Trp Cys Gln Ile Ser Gln Gln
20 25 30

Asn Phe Leu Pro Ile Ile Tyr Gln Cys Leu Ser Val Lys Phe Arg Phe
35 40 45

Asn Phe Leu Leu Pro Arg Ala His Tyr Leu Ala Pro Ile Ile Pro Ser
50 55 60

Pro Asn Ser Gln Thr His Lys His Ser Leu Leu Gln Leu Trp Ala Ser
65 70 75 80

Tyr Leu Ser Pro Ser Gly Lys Lys Cys Cys Val Thr Pro Leu Ala Val
85 90 95

Ser Val Asp Leu Val Gln Gly Arg Ala Pro Val Arg Ala Ala Gly Pro
100 105 110

Ser Ser Leu Pro Gly His Gln Gln Ile Ser Thr Ala His Arg Cys Pro
115 120 125

Gly Asn Gly Ser
130

<210> 65
<211> 202
<212> PRT
<213> Homo sapiens

<400> 65

Ile Thr Ile Phe Gln Pro Leu Leu Leu Gln Gly Leu Leu Cys Thr Leu
1 5 10 15

Ser Leu Asn Ser Pro Ser Ile Cys Ser His Asn Pro His Asp Pro Gln
20 25 30

Phe Tyr Asn Thr Thr Val Arg Ser Pro Lys Leu Pro Phe Ile His Phe
35 40 45

His Ile Thr Ile Phe Gln Pro Leu Leu Leu Gln Gly Leu Leu Cys Thr
50 55 60

Leu Ser Leu Asn Ser His Asp Ser Ser Cys Thr Leu Gly Ser Ser Val
65 70 75 80

Ser Pro Leu Leu Leu Ile Ser Arg Val Pro Phe Cys Phe Cys Trp Leu
85 90 95

Pro Tyr Lys Ala Cys Asn Ile Ile Ser His Phe Arg Lys Glu Leu Asp
100 105 110

His Leu Leu Met Asn Pro Ala Phe Met Thr His Cys Leu Thr Cys Leu
115 120 125

Trp Leu Cys Met Ser Pro Ser Phe Arg Phe Phe Leu Trp Lys Glu Arg
130 135 140

Leu Pro Lys Ser Pro Ala His Gln His Tyr Lys Cys Met Gln Thr Ser
145 150 155 160

Phe Ser Cys Leu Pro Thr Leu Lys Met Ser Lys Gln Phe Ser Lys Gly
165 170 175

Glu Lys Ile Ser Ser Pro Pro His Thr Asn Tyr Leu His Asn Ser Val

180

185

190

Thr Phe Tyr Lys Pro Cys His Cys Ile Ser
 195 200

<210> 66
 <211> 221 -
 <212> PRT
 <213> Homo sapiens

<400> 66

Thr Val Leu Ile Met Ile Val Phe Val Ile Cys Cys Trp Gly Pro Tyr
 1 5 10 15

Cys Phe Leu Val Leu Leu Ala Ala Ala Arg Gln Ala Gln Thr Met Gln
 20 25 30

Ala Pro Ser Leu Leu Ser Val Val Ala Val Trp Leu Thr Trp Ala Asn
 35 40 45

Gly Ala Ile Asn Pro Val Ile Tyr Ala Ile Arg Asn Pro Asn Ile Ser
 50 55 60

Met Leu Leu Gly Arg Asn Arg Glu Glu Gly Tyr Arg Thr Arg Asn Val
 65 70 75 80

Asp Ala Phe Leu Pro Ser Gln Gly Pro Gly Leu Gln Ala Arg Ser Arg
 85 90 95

Ser Arg Leu Arg Asn Arg Tyr Ala Asn Arg Leu Gly Ala Cys Asn Arg
 100 105 110

Met Ser Ser Ser Asn Pro Ala Ser Gly Val Ala Gly Asp Val Ala Met
 115 120 125

Trp Ala Arg Lys Asn Pro Val Val Leu Phe Cys Arg Glu Gly Pro Pro
 130 135 140

Glu Pro Val Thr Ala Val Thr Lys Gln Pro Lys Ser Glu Ala Gly Asp
 145 150 155 160

Thr Ser Leu Asp Gly Trp Asn Gly Gln Leu Met Lys Ala Asn Phe His
 165 170 175

Ser His Tyr Leu Met Met Glu Asp Ser Gly Gly Glu Leu Trp Ile Ser
 180 185 190

Ser Gln Thr Phe Lys Ala Arg Asp Gly Gly Gly Leu Pro Leu Ser Pro
 195 200 205

Asn Asn Ile Lys Asp Asn Val Pro Ser Phe Lys Lys Cys
 210 215 220

<210> 67
 <211> 595
 <212> PRT
 <213> Homo sapiens

<400> 67

Leu Glu Pro Thr Ser Lys Ala Pro Pro Gly Pro Gln Arg Pro Pro Pro
 1 5 10 15

Leu Arg Pro Ser Pro Ala Pro Arg Gly Gly Arg Pro Pro Ala Pro Ser

20

25

30

```

His His Ser Asp Leu Ala Ala Ala Ala Pro Gly Ala Gly Gly Asp Pro
 35          40          45

Arg Pro Pro Leu Gly Pro Met Glu Glu Pro Gln Pro Pro Arg Pro Pro
 50          55          60

Ala Ser Met Ala Leu Leu Gly Ser Gln His Ser Gly Ala Pro Ser Ala
 65          70          75          80

Ala Gly Pro Pro Gly Gly Thr Ser Ser Ala Thr Ala Ala Val Leu
      85          90          95

Ser Phe Ser Thr Val Ala Thr Ala Ala Leu Gly Asn Leu Ser Asp Ala
    100          105          110

Ser Gly Gly Gly Thr Ala Ala Ala Pro Gly Gly Gly Gly Leu Gly Gly
    115          120          125

Ser Gly Ala Ala Arg Glu Ala Gly Ala Ala Val Arg Arg Pro Leu Ala
    130          135          140

Thr Glu Ala Ala Pro Leu Leu Ser His Gly Ala Ala Val Ala Ala Gln
    145          150          155          160

Ala Leu Val Leu Leu Leu Ile Phe Leu Leu Ser Ser Leu Gly Asn Cys
      165          170          175

Ala Val Met Gly Val Ile Val Lys His Arg Gln Leu Arg Thr Val Thr
      180          185          190

Asn Ala Phe Ile Leu Ser Leu Ser Leu Ser Asp Leu Leu Thr Ala Leu
    195          200          205

Leu Cys Leu Pro Ala Ala Phe Leu Asp Leu Phe Thr Pro Pro Gly Gly
    210          215          220

Ser Ala Pro Ala Ala Ala Ala Gly Pro Trp Arg Gly Phe Cys Ala Ala
    225          230          235          240

Ser Arg Phe Phe Ser Ser Cys Gly Ile Val Ser Thr Leu Ser Val Ala
    245          250          255

Leu Ile Ser Leu Asp Arg Tyr Cys Ala Ile Val Arg Pro Pro Arg Glu
    260          265          270

Lys Ile Gly Arg Arg Arg Ala Leu Gln Leu Leu Ala Gly Ala Trp Leu
    275          280          285

Thr Ala Leu Gly Phe Ser Leu Pro Trp Glu Leu Leu Gly Ala Pro Arg
    290          295          300

Glu Leu Ala Ala Ala Gln Ser Phe His Gly Cys Leu Tyr Arg Thr Ser
    305          310          315          320

Pro Asp Pro Ala Gln Leu Gly Ala Ala Phe Ser Val Gly Leu Val Val
    325          330          335

Ala Cys Tyr Leu Leu Pro Phe Leu Leu Met Cys Phe Cys His Tyr His
    340          345          350

Ile Cys Lys Thr Val Arg Leu Ser Asp Val Arg Val Arg Pro Val Asn
    355          360          365

```

Thr Tyr Ala Arg Val Leu Arg Phe Phe Ser Glu Val Arg Thr Ala Thr
370 375 380

Thr Val Leu Ile Met Ile Val Phe Val Ile Cys Cys Trp Gly Pro Tyr
385 390 395 400

Cys Phe Leu Val Leu Leu Ala Ala Ala Arg Gln Ala Gln Thr Met Gln
405 410 415

Ala Pro Ser Leu Leu Ser Val Val Ala Val Trp Leu Thr Trp Ala Asn
420 425 430

Gly Ala Ile Asn Pro Val Ile Tyr Ala Ile Arg Asn Pro Asn Ile Ser
435 440 445

Met Leu Leu Gly Arg Asn Arg Glu Glu Gly Tyr Arg Thr Arg Asn Val
450 455 460

Asp Ala Phe Leu Pro Ser Gln Gly Pro Gly Leu Gln Ala Arg Ser Arg
465 470 475 480

Ser Arg Leu Arg Asn Arg Tyr Ala Asn Arg Leu Gly Ala Cys Asn Arg
485 490 495

Met Ser Ser Ser Asn Pro Ala Ser Gly Val Ala Gly Asp Val Ala Met
500 505 510

Trp Ala Arg Lys Asn Pro Val Val Leu Phe Cys Arg Glu Gly Pro Pro
515 520 525

Glu Pro Val Thr Ala Val Thr Lys Gln Pro Lys Ser Glu Ala Gly Asp
530 535 540

Thr Ser Leu Asp Gly Trp Asn Gly Gln Leu Met Lys Ala Asn Phe His
545 550 555 560

Ser His Tyr Leu Met Met Glu Asp Ser Gly Gly Glu Leu Trp Ile Ser
565 570 575

Ser Gln Thr Phe Lys Ala Arg Asp Gly Gly Gly Leu Pro Leu Ser Pro
580 585 590

Asn Asn Ile
595

<210> 68

<211> 201

<212> PRT

<213> Homo sapiens

<400> 68

Ala Ser Ala Ser Gln Ala Gln Phe Lys Lys Lys Met Phe Asn Leu Leu
1 5 10 15

Leu Thr Tyr Phe Cys Lys Ile Leu Lys Ile Tyr Thr Ile Tyr Trp Leu
20 25 30

His Asn Ile Val Lys Ala Leu Thr Ala Thr Lys Leu Tyr Ala Gln Lys
35 40 45

Trp Leu Lys Trp Tyr Ile Tyr Ile Thr Tyr Ile Leu Leu Gln Phe Val
50 55 60

Ile Glu Lys Asn Glu Met Lys Lys Val Lys Phe Gln Pro Gln Leu Cys

65 70 75 80

Phe Asn Asn Ile Gln Asp Leu Val Lys Leu Leu Lys Phe Leu Asn Ala
85 90 95

Tyr Phe Gln Phe Leu Tyr Leu Ser Arg Cys Arg Pro Val Lys Val Cys
100 105 110

Met Leu Ala Ala Ile Pro Glu Leu Tyr Phe Asp Ser Thr Asp Leu Ser
115 120 125

Cys Glu Gly Leu Trp Leu Cys Arg Ala Ser Gln Glu Thr Phe Glu His
130 135 140

Lys Val Ser Cys Thr Thr Thr Pro Ser Ser Arg His Phe Trp Thr Pro
145 150 155 160

Gly Trp Ser Thr Pro Ser Ser Ser Gly Gln Ala His Cys Ser Asp Val
165 170 175

Trp Leu Thr Pro Thr Tyr Ala Pro Ala Val Pro Gln Gly Pro Cys Cys
180 185 190

Thr Val Val Phe Ile Tyr Phe Leu Arg
195 200

<210> 69
<211> 217
<212> PRT
<213> Homo sapiens

<400> 69

Arg Leu Lys His Ile Leu Pro Ser Ser Leu Arg Leu Ala Ser Lys Asn
1 5 10 15

Ala Phe Asn Trp Leu Asn Leu Arg Ile Ile Val Tyr Cys Cys Leu Gly
20 25 30

Ile Ile Glu Cys Cys Leu Leu Ile Lys Val Glu Phe Asp Pro Pro Arg
35 40 45

Leu Pro Leu Val Trp Val Gly Glu Gly Leu Gly Phe Cys Ser Phe Phe
50 55 60

Phe Leu Leu Leu Ile Arg Ser Thr Asn Ile Tyr Cys Met Pro Met Gly
65 70 75 80

Gly Lys His Arg Phe Cys Gly Ala Ser Leu Tyr Tyr Leu Gly Asp Pro
85 90 95

Leu Ile Lys Leu Ile Lys Leu Gln Ile Gln Asn Ala Lys Leu Phe Leu
100 105 110

Arg Met Gln Ile Glu Gly Thr Leu Gln Leu Lys Asp Tyr Ser Leu Tyr
115 120 125

Asn Lys Tyr Ala Ser Gly Ala Tyr Cys Met Ser Gly Thr Leu Gly Pro
130 135 140

Val Asp Lys Val Met Asn Ala Ile Val Thr Leu Thr Trp Ile Leu Gln
145 150 155 160

Ser Ser His Phe Gln Lys Met Val Ser Leu Phe Val Pro Pro Gln Arg
165 170 175

Ala Thr Trp Tyr Thr Ala Leu Leu Val Ala Glu Gly Pro Ser Thr Pro
180 185 190

Ala Leu Phe Pro Val Ser Ser Leu Leu Trp Thr Arg Lys Asn Pro Asp
195 200 205

Leu Thr Tyr Thr Gly Gln Ser Ala Leu
210 215

<210> 70
<211> 156
<212> PRT
<213> Homo sapiens

<400> 70

Glu Gly Leu Ile Thr Ala Gly Val Ser Asp Ala Pro Leu Pro Gln Met
1 5 10 15

Gln Ile Pro Gly Thr Leu Trp Met Tyr Tyr Tyr Leu Ile Ser Leu Tyr
20 25 30

Ile Pro Phe Ser Met Asn Gly Glu Pro Met Pro Phe Trp Arg Gly Glu
35 40 45

Arg Trp Ser Ser Ser Ala Ile Leu Pro Lys Leu Phe Ala Phe Leu Glu
50 55 60

Asp Phe Pro Phe Phe Ser Glu Leu Asp Ile Trp Met Ser Glu Ala Gly
65 70 75 80

Arg Gly Phe Cys Phe Leu Ile Ala Ala Leu Arg His Thr Ser Pro Ile
85 90 95

Pro Ala Gln Met Arg Arg Pro Leu Glu Asn Lys His Gln Phe Arg Phe
100 105 110

Leu Asn Ile Ile Pro Thr Leu Ala Ile Met Pro Ala Leu Glu Thr Lys
115 120 125

Glu Leu Cys Ser Arg Lys Val Ser Val Gln Gly Tyr Thr Val Phe Ala
130 135 140

Val Cys Arg Gly Lys Phe Leu Thr Asp Ile Cys Leu
145 150 155

<210> 71
<211> 221
<212> PRT
<213> Homo sapiens

<400> 71

Leu Ala Gln Val Phe Pro Val Pro Gln Gly Asn Glu Tyr Phe Lys Gln
1 5 10 15

Lys Arg Val Arg Asp Met Ser Asn Val Tyr Cys His Thr Leu Thr Leu
20 25 30

Trp Ala Leu Ile Phe Leu Val Val Leu Ser Tyr Tyr Tyr Arg Phe Leu
35 40 45

Pro Cys Ser Tyr Leu Phe Gly Asn Gly Thr Glu Ile Trp Leu Leu Leu
50 55 60

Gly Thr Asn His Ser Ser Pro Leu Trp Lys Trp Leu Leu Ser His Lys
 65 70 75 80
 Tyr Ser Pro Ser Cys Ser Arg Leu Leu Ile Leu Asn Leu Trp Val Asn
 85 90 95
 Lys Val Thr His Leu Tyr Lys Glu Ile Gly Asp Gln Ser Asn Ser Pro
 100 105 110
 Ile Arg Lys Pro Gln Arg Val Gly Thr Asn Ser Val Met His Leu Glu
 115 120 125
 Leu Glu His Thr Cys Ser Asn Leu Gln Ser Gly Lys Leu Ile Val Leu
 130 135 140
 Trp Trp Leu Lys Lys Gln Arg Gly Thr Gly Ser Ala Glu Lys Pro Met
 145 150 155 160
 Asn Lys Pro Pro Val Pro Tyr Gly Phe Phe Leu Lys Ser Glu Phe Arg
 165 170 175
 Ala Gln Asn Glu Ser Ile Tyr Leu Val Leu Thr His Ser Ile Lys Asn
 180 185 190
 Glu Glu Thr Gly Ala Glu Leu Leu Lys Asn Ile Pro Val Ser Cys Lys
 195 200 205
 Ala Arg Thr Gly His Pro Tyr Val Leu Thr Leu Pro Cys
 210 215 220
 <210> 72
 <211> 237
 <212> PRT
 <213> Homo sapiens
 <400> 72
 Leu Pro Ser Gln Gly Glu Gly Arg Ala Pro Lys Gly Leu Met Arg Gly
 1 5 10 15
 Leu Thr Asp Gln Gly Arg Glu Gln Asn Thr Phe Leu Ser Ile Gly Asp
 20 25 30
 Ser Val Thr Trp Leu Ser Leu Ile Ile Ser Glu Ala Trp Arg Ile His
 35 40 45
 Leu Phe Val Ser Pro Gly Arg Arg Glu Asn Lys Leu Trp Thr Phe Ser
 50 55 60
 Ser Leu Tyr Asp Asn Ser Leu Tyr Val Asp Cys Lys Gly Gly Thr Lys
 65 70 75 80
 Pro Ser Leu Leu Ser Asn Thr Ile Trp Gln Ser Pro Trp Val Ile Ile
 85 90 95
 Leu Asn Ile Asp Ala Tyr Cys Ser Arg Val Lys Lys Ile Ser Met Thr
 100 105 110
 Ala Phe Gln Phe Tyr Lys Phe Asn Leu Tyr Ser Ala Tyr Cys His Pro
 115 120 125
 His Val Leu Lys Asn Lys Ile Lys Asn Lys Lys Pro Ser Asn Tyr Val
 130 135 140

Leu Tyr Ser Lys Glu His Ser Tyr Ile Ser Leu His Cys Ile Leu Thr
145 150 155 160

Thr Ile Leu Cys Ser Ile Cys Phe Thr Pro Phe Leu Leu Cys Phe Val
165 170 175

Tyr Lys Glu Met Ser Pro Arg Glu Leu Asn Gly Leu Pro Gln Leu Val
180 185 190

Lys Leu Lys Leu Gln Ser Arg Ser Phe Tyr Phe Gln Ile His Asn Leu
195 200 205

Gln Pro Ser Val Glu Ser Tyr Asn Glu Ile Met Val Arg Gly Leu Ser
210 215 220

Ile Ser Val Gln Val Cys Pro Ala Pro Thr Thr Ser Ile
225 230 235

<210> 73

<211> 224

<212> PRT

<213> Homo sapiens

<400> 73

Ser Val His Cys Tyr Gln Glu Asn Asn Ala Phe Ser Gly Ser Leu Ile
1 5 10 15

Leu Asn Thr Leu Ala Gly Asn Leu Leu Ala Arg Thr Gly Asp Leu Ile
20 25 30

Ile Ser Ser Trp Met Arg Leu Trp Gly Gly Arg Ile Leu Thr Gly Tyr
35 40 45

Thr Ala Ala Gln Thr Arg Val Ala Leu Gly Arg Arg Glu Gly Glu Asn
50 55 60

Trp Val Asn Pro Met Met Pro Val Met Thr Asp Val Gly Leu Leu Asn
65 70 75 80

Lys Phe Ser Ser Gln Lys Leu Met Ile Phe Thr Ile Pro Ile Trp Ile
85 90 95

Ser Tyr Gly Glu Ile Gln Val Trp Leu His Ser Phe Ser Leu Ser Ile
100 105 110

His Thr Leu Ile His Tyr Leu Leu Glu Ala Asn Phe Val Pro Gly Leu
115 120 125

Val Arg Tyr Gly Val Thr Ser Cys Thr Lys Gln Pro Gly Ser Leu Gly
130 135 140

Pro Thr Val Gly Lys Gln Gly Lys Cys Gly Arg Ile Ile Lys Ile Thr
145 150 155 160

His Thr Ala Pro Arg Trp Gln Gly Lys Cys His Phe Phe Tyr Phe Leu
165 170 175

Leu Met Asp Leu Arg Leu Phe Trp Phe Gln Trp Ser His Phe Ser Leu
180 185 190

Ser Ile Gln Phe Ile Gln Asn Ser Phe Ala Ser Asp Lys Ile Ala Asn
195 200 205

Trp Leu Pro Ala Asn Ser Phe Ser Pro Gln Ser Met Gly Asn Ala Gly

210

215

<210> 74
<211> 216
<212> PRT
<213> Homo sapiens

<400> 74

Leu Leu Leu Leu Lys Val Ile Ala Phe Arg Leu Phe Gln Leu Gln Ser
1 5 10 15
Lys Glu Val Tyr Val Tyr Ile Val Ile Cys Glu Tyr Thr His Thr Tyr
20 25 30
Thr Tyr Phe Tyr Met Ser Ser Ile Phe Lys Leu Ser Arg Ile Val His
35 40 45
Thr Asp Ile Ser Asn Pro Asn Gln Leu Pro Gln Gly Leu Phe Arg Pro
50 55 60
Phe Ser Leu Gly Ser Leu Gln Leu Leu Leu Gln Gln Leu Glu Ile Trp
65 70 75 80
Leu Pro Tyr Ser Phe Ala Leu Phe Asn Ser Ser Thr His Lys Trp Trp
85 90 95
Leu Gln Asn Leu Ile Pro Pro Trp Glu Ile Thr Leu Leu Thr Lys Val
100 105 110
Gln His Leu Cys Ile Val Leu Phe Glu Phe Leu Asp Leu Glu Ile Pro
115 120 125
Leu Leu Phe Gln Ser Tyr Leu Gly Gln Asn His Phe Pro Phe Phe Ser
130 135 140
Glu Val Val Leu Cys Ile Cys Asn Thr Val Arg Leu Phe Cys His Met
145 150 155 160
Val His Ser Ile Leu Gly Phe Pro Ile Ser Phe Phe Asn Ile Cys Ile
165 170 175
Tyr Val Ser Phe Phe Cys Ala Val Ser Phe Tyr Gly Phe Gln Leu Met
180 185 190
His Ser Val Met Asn Leu Pro Pro Glu His His Thr Glu Phe His Gln
195 200 205
Leu Lys Lys Phe Pro Met Phe Tyr
210 215

<210> 75
<211> 204
<212> PRT
<213> Homo sapiens

<400> 75

Phe Leu Pro Leu Cys His Asn Gly His Asp Asp Ser Trp Leu Thr Gln
1 5 10 15
Thr Phe Cys Val Trp Lys Asp Leu Ile Cys Pro Phe Leu Glu Ala Thr
20 25 30
Ile Leu Arg Phe Glu Lys Ser Phe Leu Lys Asn Lys Ile Phe Leu Ile

Page 40

Met Phe Leu Leu Asn Val Met Asn Ser Leu Pro Met Leu Val Ile Leu
145 150 155 160

Phe Ser Val Ser His Cys His Arg Cys Leu Pro Ala Asp Pro Gly Leu
165 170 175

Gly Arg Pro Val Leu Phe Pro Asp Ile Ala His Leu Gly Cys Leu Gln
180 185 190

Glu Met Ala Gly Ile Phe Gly Thr Ile Cys Ala Arg Trp Ser Ser Ser
195 200 205

Arg Lys Ser Thr Ser Thr Gly Gly Ile Leu Leu Leu Ala Cys Arg Ser
210 215 220

Met Gly Leu Leu
225

<210> 77

<211> 220

<212> PRT

<213> Homo sapiens

<400> 77

Val Leu Thr Thr Ser Thr Val Phe Leu Lys Gln Asn Cys His Leu Leu
1 5 10 15

Glu Arg Lys Ile Tyr Gly Glu Ser Pro Ser Ser Ser Leu Thr Pro Glu
20 25 30

Lys Ala Trp Ile Lys Asn Ser Arg Gln Pro Trp Arg Leu Ser Leu Leu
35 40 45

His Gly Thr Met His Pro Trp Gly Arg Gln Lys Met Glu Lys Cys Ile
50 55 60

Ile Ile Lys Cys Leu Leu Cys Thr Arg Ser Gln His Phe His Met Tyr
65 70 75 80

Ser His Pro Ala Pro Phe His Ile Cys Ser His Phe Pro Asp Glu Gly
85 90 95

Thr Glu Ile Pro Arg Arg Glu Val Thr Ser Gly Gln Ser Trp Asp Leu
100 105 110

His Thr Ala Arg Lys Ser Thr Ala Asp Ile Asp Cys Val Leu Pro Leu
115 120 125

Cys Gln Leu Leu Phe Glu Gly Val Ser Arg Phe Gln Leu Ile Phe Ser
130 135 140

Gln Lys Cys His Gly Asp Asp Glu Glu Thr Glu Ala Lys Tyr Leu Ala
145 150 155 160

Val Ala Gln Leu Pro Asp Asp Gly Val Arg Ile Gln Tyr Trp Gln Cys
165 170 175

Trp Val Gln Ser Gln Val Leu Leu Thr Leu His Pro Val Cys Tyr Pro
180 185 190

Leu Ser Thr Ala Ser Gln Arg Lys Thr Tyr Thr His Gly Ala Phe Met
195 200 205

Leu Phe Gly Asn Val Gln His His Gly Asn Ile Ile
 210 215 220

<210> 78
 <211> 157
 <212> PRT
 <213> Homo sapiens

<400> 78

Lys Ile His Ser Ala Ala Gly Arg His Arg Ala Phe Ser Thr Cys Ser
 1 5 10 15

Ser His Leu Thr Val Val Leu Leu Gln Tyr Gly Cys Cys Ala Phe Met
 20 25 30

Tyr Leu Cys Pro Ser Ser Ser Tyr Asn Pro Lys Gln Asp Gln Phe Ile
 35 40 45

Ser Leu Val Tyr Thr Leu Gly Thr Pro Leu Leu Asn Pro Leu Ile Tyr
 50 55 60

Ala Leu Arg Asn Ser Glu Met Lys Gly Ala Val Gly Arg Val Leu Thr
 65 70 75 80

Arg Asn Cys Leu Ser Gln Asn Ser Glu Arg Arg Gly Asp Ser Leu Ser
 85 90 95

Gly Lys Tyr Leu Val Pro Ala His Gln Ile Cys Met Lys Leu Arg Phe
 100 105 110

Leu Ser Phe Gly Val Lys Thr His Leu Lys Asp Gly Ile Asn Tyr Met
 115 120 125

Asp Thr Val Tyr Val Cys Gln Arg Phe Leu Asn Ile Ser Thr Ile Leu
 130 135 140

Cys Asn Phe Ser Ser Trp Lys Glu Leu His Glu His Lys
 145 150 155

<210> 79
 <211> 227
 <212> PRT
 <213> Homo sapiens

<400> 79

Ile Lys Ile Arg Leu Gly Leu Lys Leu Ser Leu Pro Leu Ser Arg Glu
 1 5 10 15

Met Lys Cys Thr Leu Ser Thr Ile Leu Ile Leu Lys Leu Phe Lys Lys
 20 25 30

Cys Phe Arg Asp Ser Leu Pro Asp Lys Leu Ala Met Asn Phe Gln Pro
 35 40 45

Thr Arg Ala Phe Ile Tyr Ile Arg Gly Val Gln Glu Phe Arg Gln Leu
 50 55 60

Phe Thr Leu Lys Lys Ile Leu Ile Val Lys Thr Thr Lys Val Asp Gln
 65 70 75 80

Leu Ile Leu Phe Leu Trp Leu Leu Val Phe Ser Lys Val Leu Ile Leu
 85 90 95

Leu Tyr Leu Ala Val Ser Lys Phe Gln Lys Cys Phe Cys Thr Asp Trp
 100 105 110

Pro His Phe Lys Phe Ser Ile Gly Asn Phe Lys Trp Val Leu Met Leu
 115 120 125

Pro Gly Val Leu Gly Leu Ile Leu Asp Phe Ser Val Phe Ser Leu Ser
 130 135 140

Cys Phe Phe Met Thr Ile Leu Cys Leu Pro Ser Leu Leu Lys Phe Pro
 145 150 155 160

Lys Asp Val Phe Tyr His Pro His Ala Gln Leu Met Asn Leu Ser Ser
 165 170 175

Tyr Phe Ala Glu Ile Met Arg Ala Ile Arg Ser Ser His His Cys Ser
 180 185 190

Trp Gly Ile Ile Cys Leu His Phe Gln Gln Arg Pro Cys Ser Ser Pro
 195 200 205

Arg Pro Thr Leu Leu Ala Trp Ala Ala Ile Thr Glu His His Arg Leu
 210 215 220

Gly Gly Leu
 225

<210> 80
 <211> 164
 <212> PRT
 <213> Homo sapiens

<400> 80

Ser Leu Ser Ser Arg Gly Ser Glu Ala Gln Asn Cys Leu Glu Ile Cys
 1 5 10 15

Pro Ser Ser Asp Thr Glu Leu Met Leu Glu Arg Glu Pro Asn Leu Phe
 20 25 30

His Leu Asn Ser Cys Gly Lys Met Asn Thr Asn Cys Phe Leu Tyr Tyr
 35 40 45

Asp Asn Lys Lys Leu Ser Ser Ile Phe Leu Tyr Lys Lys Ala Ile His
 50 55 60

Met His Gln Ser Gly His Leu Leu Val Thr Phe Phe Pro His His Phe
 65 70 75 80

Thr Thr Phe His Phe Thr Thr Cys Cys Leu Asn Pro Leu Ile His Phe
 85 90 95

Phe Lys Lys Glu Asn Glu Phe His Tyr Tyr Gln Thr Pro Gly Ser Ser
 100 105 110

Cys Asp Gln Leu Phe Leu Val Val Lys Cys Cys Pro Glu Thr Lys Val
 115 120 125

Asn Leu Ser Val Leu Leu Cys His Asn Arg Thr Phe Pro Val Arg Arg
 130 135 140

Glu Cys Gly Arg Phe Gly Val Asn Pro Gly Met Gly Gln Gly Arg His
 145 150 155 160

Lys Ser Arg Asn

<210> 81
 <211> 221
 <212> PRT
 <213> Homo sapiens

<400> 81

Leu Glu Phe Tyr Ser Lys His Gln Ser Arg Gly Ile Val Arg Glu Arg
 1 5 10 15

Asn Met Leu Ile Gln Asp Ser Gly Ser Leu Phe Phe Ser Ser Phe Phe
 20 25 30

Ser Gln Asn Asp Leu Asp Ser Cys Lys Val Leu Val Tyr Leu Val Ser
 35 40 45

Lys Ser Leu Phe Leu Leu Asn Phe Ile Cys Ile Asn Gln Leu Tyr Met
 50 55 60

Thr Lys Met Ser Pro Lys Phe Lys Ser Leu His Ser Lys Ala Leu Tyr
 65 70 75 80

Val His Leu Ala Ser Phe Gln Lys Thr Lys Ala Val Val Leu Lys Phe
 85 90 95

Ser Cys Thr Leu Ile Thr Gly Lys Leu Phe Lys Leu Leu Met Thr Lys
 100 105 110

Pro His Val Arg Leu Ile Tyr Ala Glu Ser Leu Gly Gln Gly Pro Arg
 115 120 125

Tyr Gln His Phe Leu Lys Leu Arg Asn Asn Gln Gly Glu Pro Leu His
 130 135 140

Lys Met Val Asn Ala Thr Phe Ile Val Ile Phe Phe Lys Ile Met Val
 145 150 155 160

Glu Leu Ile Leu Ile Leu Val Pro Ser His Gly Asn Phe Phe Arg Leu
 165 170 175

Arg Glu Phe Ile Leu Ala Leu Arg Leu Leu Lys Asn Leu Glu Ile Gln
 180 185 190

Val Phe Leu Phe Ile Phe Phe Leu Ile Leu Glu Tyr Ala Ser Ala His
 195 200 205

Pro Tyr Leu Ile Ile Leu Glu Lys Tyr Ile Lys Thr Phe
 210 215 220

<210> 82
 <211> 216
 <212> PRT
 <213> Homo sapiens

<400> 82

Ile Ile Ile Met Leu Ile Leu His His Ile Gln Ile Asp Cys Asn Ile
 1 5 10 15

Val Ile Cys Asn Ile Leu Phe Lys Ile Asn Leu Ser Glu Ser Tyr Ile
 20 25 30

Ala Thr Val Val Ser Leu Ile His Arg Phe Ile Phe Tyr Gly Phe Ser

35

40

45

Tyr Leu Leu Ser Thr Arg Ile Gln Gln Tyr Tyr Met Gly Lys Ser Gln
50 55 60

Lys Thr Val Cys Lys Phe Phe Val Arg Cys Ser Gly Gln Arg Asp Lys
65 70 75 80

Ile Ser Cys Cys Ser Ser Leu Ser Cys Leu Asn Met Asn Tyr Pro Leu
85 90 95

Ser Ser Ile Ser Thr Leu His Met Leu Pro Ser His Ser Ser Phe Ser
100 105 110

Ser Cys Phe Asp Tyr Leu Ile Glu Lys Thr His Ser Ile Tyr Arg Val
115 120 125

Phe Tyr Gly Ala Arg Glu Asn Phe Leu Phe Val Leu Arg Phe Thr Glu
130 135 140

Asn Ser Thr His Lys Gly Arg Leu Ile Gly Met Lys Val Lys Lys Lys
145 150 155 160

Ile Tyr His Gln Trp Arg Leu Gln Ser Asp Tyr Ser Ile Ala Ile Asn
165 170 175

Gly Leu Gln Trp Leu Lys Tyr Arg Phe Glu Val Thr Lys Arg Val Glu
180 185 190

Val Leu Gly Ser Trp Gln Asn Arg Leu Trp Glu Glu Glu Lys Arg Asn
195 200 205

Pro Gly Gln Arg Ser Ser Cys Asp
210 215

<210> 83

<211> 118

<212> PRT

<213> Homo sapiens

<400> 83

Phe Phe Pro Leu Ser Val Ser Leu Met Leu Ser Ser Lys Trp Arg Trp
1 5 10 15

Arg Gly Phe Thr Ser Leu Phe Ser Asn Ser Pro Phe Phe Gly Phe Phe
20 25 30

Ser Ser Thr Ser Lys Ser Val Gln Asn Val Pro Leu Ala His Arg Lys
35 40 45

Ser Phe Leu Asp Pro Ala Thr Tyr Leu Thr Lys Ile Pro His Phe Ser
50 55 60

Ser Ser Phe Lys Ile Ser Phe Ile Met Val Cys Val Asn Gly His Ile
65 70 75 80

His Leu Ile His Ser Phe Leu Lys Phe Gln Lys Asn Gly Phe Val Ser
85 90 95

Cys Tyr Phe Asn Gly Ile Ile Phe Pro Lys Ile Asn Arg Thr Phe Pro
100 105 110

Gln Ala Gln Ser Ser Arg
115

<400> 84

```
<210> 85
<211> 202
<212> PRT
<213> Homo sapiens
```

<400> 85

Page 46

Pro Ser Leu Gly Ile Arg Arg Lys Thr Arg Pro Gln Ile Pro Gly Pro
 115 120 125

Ser Thr Leu Phe Leu Leu Gly Thr Ser Phe Thr Ser Ser Ala Asp
 130 135 140

Ala Pro Leu Leu Pro Thr Pro Pro Arg Lys Val Ser Ser Gln Gln Ala
 145 150 155 160

Leu Thr Lys Gly Ser His Phe Leu Pro Lys Gly Glu Ser Ser Gln Ala
 165 170 175

Val Asn Phe Ser Asn Phe Cys His Cys Ser Ser Val Ala Asp Leu Pro
 180 185 190

Ser Ser Leu Ser Trp Arg Ile Leu Pro Gly
 195 200

<210> 86
 <211> 189
 <212> PRT
 <213> Homo sapiens

<400> 86

Leu Asn Ala Thr Pro Phe Ser Ser Glu Thr Leu Trp Cys Ile Leu Gly
 1 5 10 15

His Tyr Leu Ser Lys Gly Pro Lys Leu Asn Ser Ser His His Pro Ser
 20 25 30

Phe Phe Cys Leu Arg Phe Tyr Phe Pro Asn Gln Ile Trp Val Asn Phe
 35 40 45

Gln Pro Leu Ser Val Ser Tyr Phe Gln Ser Asn Lys Thr Cys Met Asp
 50 55 60

Leu Phe Cys Ile Ser Ser Asn Val Ile Ile His Ser Lys Ser His Cys
 65 70 75 80

Leu Thr Ile Ser Leu Pro Ile Ala Leu Ala Ile Lys Lys Leu His Trp
 85 90 95

His Gly Phe Gln Thr Cys Ile Leu Phe Phe Gly Gly Leu Ile Leu Asn
 100 105 110

Leu Lys Tyr Leu Arg Ile Ser Asn Thr Ile Phe Lys Met Gln Gln Ile
 115 120 125

Phe Lys Thr Ala Ser Leu Cys Gln Ala Lys Gly Val Ser Cys Gln Leu
 130 135 140

Ser Leu Thr Ala Lys Glu Ala Lys Ile Ile Leu Met Val Val Leu Lys
 145 150 155 160

Glu Ala Ser Ala His Phe Leu Gly Gln Cys His Pro Thr His Leu Leu
 165 170 175

Gln Gly Leu Asp Thr Lys Gly Asp Val Ser Asp Phe Pro
 180 185

<210> 87
 <211> 191
 <212> PRT

<213> Homo sapiens

<400> 87

```

Asn Arg Lys Asn Leu Lys Ile Ser Thr Val Phe Asn Gln Phe Phe Ser
1      5      10      15
Leu Leu Pro Val Leu Trp His Asn Ile Val Leu Asn Trp Lys Asn Thr
20      25      30
Met Leu Ala Phe Thr Tyr Met Ser Ile Leu Ile Leu Ser Arg Cys Leu
35      40      45
Val Ser Pro Tyr Leu Lys Leu Leu Leu Ile Ile Leu Phe Cys Ser Leu
50      55      60
Tyr Val Leu Trp Ala Asn Lys Ser Tyr Pro Pro Asn Lys Leu Thr Phe
65      70      75      80
Lys Lys Phe Ala Lys Asp Trp Leu Pro Ile Ser Leu Tyr Leu Leu Ile
85      90      95
Pro Phe Lys Ala Lys Tyr Cys Phe Ala Thr Ile Leu Leu Leu His Tyr
100     105     110
Thr Glu Leu Pro Ala Leu Phe Ser Ala Lys Trp Lys Ala Tyr Phe Ser
115     120     125
Lys Ser Tyr Val His Leu Leu Leu His Asp Ile Asn Lys His Asn Thr
130     135     140
Ser Ile Thr His Phe Thr Asn Ala Arg Leu Ala Lys Asn His Thr Tyr
145     150     155     160
Lys Trp Pro His Leu Leu Tyr Pro His Pro Gly His Val Leu Ser Leu
165     170     175
Pro Trp Lys Pro Met Glu Lys Leu Arg Thr Leu Glu Arg Met Trp
180     185     190

```

<210> 88

<211> 194

<212> PRT

<213> Homo sapiens

<400> 88

```

Lys Lys Phe Leu Arg Glu Gln Ile Cys Asp Phe Ile Met Ser Phe Ile
1      5      10      15
Met Phe Cys Ser Phe Gln Ile Gln Met Ser Ile Ile Cys Phe Tyr Asp
20      25      30
Gln Ser Ile Ile Pro Cys Lys His Ile Ser Ala Leu Ile Leu Phe Leu
35      40      45
Asn Asn Thr Gly Asn Val Ile Cys Cys Lys Leu Leu Thr Phe Val Arg
50      55      60
Lys Phe Cys Phe Thr Glu Tyr Val Arg Cys Arg Gln Asn Ile Asn His
65      70      75      80
Cys Phe Ile Phe Met Val Glu Glu Lys Ser Ile Ala Cys Ser Pro Phe
85      90      95

```


Ala Val Tyr Lys Gly Glu Phe Tyr Cys Leu Asn Ser Phe Ile Phe Trp
 100 105 110

Pro Val Gln Glu Thr Phe Ile Ser Lys Ile Trp Met Tyr Val Phe His
 115 120 125

Ile Leu Glu Phe Ile Val Trp Lys Asn Thr Ile Lys Val Asp Gln Lys
 130 135 140

Ile Leu Lys Ile Leu Thr Ser Cys Leu Ser Tyr Val Lys Val Leu Trp
 145 150 155 160

Leu Ile Leu Phe Ile Leu Ser Cys Ser Leu Ala Gly Tyr Trp Gln Thr
 165 170 175

Gln Ser Phe Cys Phe His Lys Glu Leu Met Lys Arg Thr Ile Gly Lys
 180 185 190

Pro Thr

<210> 89

<211> 218

<212> PRT

<213> Homo sapiens

<400> 89

Gln Ser Gln Pro Ser Leu Pro Gly Ser Met Gly Asp Glu Leu Ala Pro
 1 5 10 15

Cys Pro Val Gly Thr Thr Ala Trp Pro Ala Leu Ile Gln Leu Ile Ser
 20 25 30

Lys Thr Pro Cys Met Pro Gln Ala Ala Ser Asn Thr Ser Leu Gly Leu
 35 40 45

Gly Asp Leu Arg Val Pro Ser Ser Met Leu Tyr Trp Leu Phe Leu Pro
 50 55 60

Ser Ser Leu Leu Ala Ala Ala Thr Leu Ala Val Ser Pro Leu Leu Leu
 65 70 75 80

Val Thr Ile Leu Arg Asn Gln Arg Leu Arg Gln Glu Pro His Tyr Leu
 85 90 95

Leu Pro Ala Asn Ile Leu Leu Ser Asp Leu Ala Tyr Ile Leu Leu His
 100 105 110

Met Leu Ile Ser Ser Ser Ser Leu Gly Gly Trp Glu Leu Gly Arg Met
 115 120 125

Ala Cys Gly Ile Leu Thr Asp Ala Val Phe Ala Ala Cys Thr Ser Thr
 130 135 140

Ile Leu Ser Phe Thr Ala Ile Val Leu His Thr Tyr Leu Ala Val Ile
 145 150 155 160

His Pro Leu Arg Tyr Leu Ser Phe Met Ser His Gly Ala Ala Trp Lys
 165 170 175

Ala Val Ala Leu Ile Trp Leu Val Ala Cys Cys Phe Pro Thr Phe Leu
 180 185 190

Ile Trp Leu Ser Lys Trp Gln Asp Ala Gln Leu Glu Glu Gln Gly Ala

195

200

205

Ser Tyr Ile Leu Pro Pro Ser Met Gly Thr
 210 215

<210> 90
 <211> 223 -
 <212> PRT
 <213> Homo sapiens

<400> 90

His Phe Lys Ile Asn Leu Phe Pro Val Asn Leu Cys Ser Ser Ser His
 1 5 10 15
 Pro Leu Phe Asn Glu Leu Pro Pro Phe Pro Thr Leu Phe Leu Ala Phe
 20 25 30
 Ile Pro Met Val Pro Leu Lys Val Phe Ser Ser Ser Leu Pro Phe Ser
 35 40 45
 Pro Pro Val Phe Ser Gly Val Asn Gly Ala Ala Asn Ser Pro Ser Ser
 50 55 60
 Ser Cys Leu Asn Arg Ser Ser Ser Pro Thr Pro Ala Ala Ala Pro Tyr
 65 70 75 80
 Ser Gln Ser Gln Ser Pro Val Cys Val Ile Ala Gly Met Ser Leu Glu
 85 90 95
 Ser Thr Asn Ile Leu Tyr Ser His Thr Cys Leu Pro Pro Met Ser Ser
 100 105 110
 Ala Pro Leu Leu Val Ser Glu Phe Gln Val Gly Pro Val Pro Phe Phe
 115 120 125
 Leu Pro Cys Arg Leu Ser Arg Thr Arg Ser Leu Pro Thr Ser Asp Phe
 130 135 140
 Leu Ser Asp Asp Phe Trp Gly Phe Ser Ile Cys Leu Leu Glu Gly Pro
 145 150 155 160
 Leu Gly Asp Phe Tyr Gly Thr Leu Ile Ala Ser Phe Leu Tyr Leu Arg
 165 170 175
 Asn Val Phe Leu Leu Leu Glu Thr Pro Lys Ile His Asp Ile Phe Phe
 180 185 190
 Thr Lys Leu Phe Leu Leu Ser Pro Ala Phe Asn Lys Ser Leu Phe Ala
 195 200 205
 Lys Lys Trp Cys Arg Phe Phe Thr Thr Ala Ser Glu Lys Ser Val
 210 215 220

<210> 91
 <211> 193
 <212> PRT
 <213> Homo sapiens

<400> 91

Phe Pro Arg Ile Val Cys Thr Val Thr Gly Val Ala Val Tyr His Ser
 1 5 10 15
 Ile Tyr Thr Ser Ile Trp His Thr Ala Gly Ala Ser Gly Thr Thr Tyr

20

25

30

Gln Ser Val Ser Leu Pro Asp His Phe His Asp Val Leu Ser Tyr Leu
 35 40 45
 Pro Cys Asn Lys Leu Val Asn Val Tyr Asp Cys Phe Val Ile Pro Met
 50 55 60
 Gln Ser Cys Asn Asn Asn Met Tyr Phe Lys Asn Leu Gly Ile Phe Leu
 65 70 75 80
 His Thr Ile Ser Ser Ile His Ile Asn Glu Lys Ser Lys Leu Gly Val
 85 90 95
 Ser Val Lys His Trp Ile Phe Thr Met Leu Ile Gly Val Pro Phe Ile
 100 105 110
 Ile Ala Ala Tyr Arg His Ile Ala Ile Val Pro Cys Thr Phe Asn His
 115 120 125
 Gln Cys Cys Gln Ala Ser Lys Ala Val Asn Val Tyr Leu Gly Leu Ile
 130 135 140
 Ile Arg Ile Thr Arg Asn Asn Phe Phe Asn Phe Asn Ile Leu Phe Phe
 145 150 155 160
 His Arg Leu Leu Gly Tyr Arg Cys Cys Leu Ile Thr Val Leu Tyr Trp
 165 170 175
 Phe Glu Arg Phe Gly Cys Thr Gln His Pro Ser Ser Ile His Tyr Ser
 180 185 190

Leu

<210> 92
 <211> 191
 <212> PRT
 <213> Homo sapiens

<400> 92

Gly Leu Phe Arg Glu Pro Leu Glu Ile Pro Pro Pro Trp His Gln Leu
 1 5 10 15
 Pro Pro Pro Pro Glu Leu Thr Val Ser Ser Leu Asp Ala Ala Pro Gly
 20 25 30
 Lys Val Ile Asn Asn Gln Val Ser Lys Gln Cys Trp Ala Val Phe Leu
 35 40 45
 Ile Leu Pro Phe Pro Asn Trp Val Leu Phe Gly Lys Leu Leu Ser Tyr
 50 55 60
 Phe Ile Cys Thr Met Gly Tyr Thr Tyr Ala Phe Tyr Ile Trp Leu Leu
 65 70 75 80
 Arg Arg Leu Ser Asp Met His Thr Lys Asn Ala Glu Gln Asn Thr Leu
 85 90 95
 Ser Ile Ser Phe Leu Ser Val Ile Lys Trp Arg Pro Leu Arg Leu Ser
 100 105 110
 Asn Leu Leu Leu Leu Trp Leu Ile Leu Val Leu Ile Leu Ile Tyr Lys
 115 120 125

Leu Cys Cys Ile Trp His Met Val His Val His Glu Tyr Val Leu Tyr
130 135 140

Lys Gly Met Lys Asn Gln Leu His Glu Lys Lys Phe Gln Ile Leu His
145 150 155 160

Phe Thr Asn Thr Asp Thr Lys Asn Thr Lys Ile Leu Arg Gly Lys Ser
165 170 175

Asp Leu Ala Thr Ser Thr Trp Ala Ser Leu Lys Val Cys Phe Trp
180 185 190

<210> 93
<211> 133
<212> PRT
<213> Homo sapiens

<400> 93

Leu Asn Leu Lys Ile Asn Arg Ala Ile Leu Asp Arg Gln Asn Phe Gly
1 5 10 15

Asp Ser Glu Cys Pro Arg Asn Asp Pro Met Met Phe Val Gly Phe Ile
20 25 30

Ile Cys Ile Arg Cys Val Leu Trp Leu Gly Phe Met Ala Cys Phe Tyr
35 40 45

Phe Leu Leu His Ser Thr Gly Leu Lys Arg Gln Gln Gly Gln Cys Leu
50 55 60

Ile Tyr Asn Val Val Leu Cys Phe Leu Asn Lys Val Pro Gln Leu Ser
65 70 75 80

Glu Ile Phe Met Val Asn Ile Lys Gln Ser Lys Phe Ile Cys Leu Pro
85 90 95

Glu Ser Leu Val Ile Tyr Leu Asp Ser Phe Arg Ile Pro Leu Asn Ile
100 105 110

Ile Glu Gly Cys Met Ile Phe Lys Thr Glu Met Glu Ile Met Leu Trp
115 120 125

Ile Asn Ala Ile Arg
130

<210> 94
<211> 202
<212> PRT
<213> Homo sapiens

<400> 94

Tyr Ala Lys Glu Leu Thr Val Trp Ala Lys Val Asn Glu Ser Leu Lys
1 5 10 15

Leu His Ala Lys Leu Cys Val Val Ala Cys Val Cys Val Tyr Ser Tyr
20 25 30

Val Phe Phe Lys Glu Val Tyr Tyr Leu Leu Asp Ser Gln Ile Val Gln
35 40 45

Trp Pro Gln Asn Ile Lys Thr His Val Gln Ile Gln Ser Lys Leu Arg
50 55 60

Ala Val Lys Glu Ile Gln Thr Lys Asn Ser Phe Cys Pro Ser Ser Phe
65 70 75 80

Asn Cys Leu Arg Gly Ala Trp Asp Trp Ala Thr Tyr Trp Ala Gly His
85 90 95

Leu Gln Arg Ile Leu Gln Gly Lys Gly Thr Gln Thr Ser Gly Leu Glu
100 105 110

Ser Lys Phe Lys Ser Cys Gly Val Gly Tyr Met Leu Gln Glu Ile Arg
115 120 125

Glu Ser Val Asn Pro Glu Ile Gly Glu Ala Asp Ser Pro Arg Lys Asp
130 135 140

Asn Ser Glu Trp Ser Leu Glu Gly Arg Val Arg Leu Glu Leu Glu Pro
145 150 155 160

Glu Val His Ala Ser Ala Ser Val Val Ser Arg Asp Met Thr Lys Leu
165 170 175

Glu Arg Arg Lys Ala Arg Asn Gly Trp Gly Trp Lys Leu Leu Leu Asp
180 185 190

Ala Ser Gln Thr Lys Gly Ile Leu Asp Pro
195 200

<210> 95
<211> 178
<212> PRT
<213> Homo sapiens

<400> 95

Lys Leu Ser Val Phe Ile Pro Leu Gln Thr His Thr Pro Asn Ile Gln
1 5 10 15

Trp Glu Arg Asn Asn Ile Thr Ala Glu Glu Val Ser Glu Arg His Lys
20 25 30

Ala Val Ile Gly Ser Leu Leu Asn Ser Pro Arg Gln Met Leu Pro Gly
35 40 45

Ser Leu Pro Trp Gly Gly Leu Val Ile Phe Leu Glu Val Val Ser Ser
50 55 60

Ser Leu Phe Ser Thr Val Leu Gln Leu Pro His Pro Ser Ser Cys Leu
65 70 75 80

Leu Arg Ser Leu Tyr Pro Leu Asp Ser Arg Leu Leu Leu Asp Val Leu
85 90 95

Thr Phe Leu Gln Gln Lys Leu Ser Leu Phe Leu Asn Leu Phe Ala Val
100 105 110

His Arg Lys Trp Lys Val Gln Arg Leu Leu Phe Asn Phe Leu Ser Leu
115 120 125

Phe Ile Ala Ser Trp Val Pro Phe Thr Tyr Ile Thr Leu Leu Lys Ser
130 135 140

Phe Cys Gly Leu Ser Met Tyr Gln Ile Ile Asp His Phe Ile Lys Ala
145 150 155 160

00196US1.ST25

Thr Phe Phe Val Phe Gln Thr Ser Phe Leu Tyr Phe Gly Gln Val Arg
165 170 175

Pro Leu

<210> 96 -
<211> 191
<212> PRT
<213> Homo sapiens

<400> 96

Met Val Phe Val Arg Ser Tyr Cys Pro Lys Ser Leu Phe Cys Pro Ser
1 5 10 15

Tyr Asp Ile Cys Phe Asn Ile Asn Asp Ala Gln Leu Cys Leu Asp Pro
20 25 30

Lys Arg Arg Ser Leu Tyr Asp Phe Pro Cys Cys Tyr Gly Gln Glu Phe
35 40 45

Ser Phe Lys Leu Phe Trp Gly Leu Ala Thr Arg Gly Ser Val Gln Ser
50 55 60

Val Gln Arg Ala Asp Leu Ser Ser Leu Ile His Ile Pro Pro Phe Trp
65 70 75 80

Ser Lys Tyr Ala Lys Ser Ser Ile Asn Ser Gln Ala Leu Ile Ser Phe
85 90 95

His Ile Ile Thr Arg Trp Cys Gly Tyr Leu Ser Gln Ile Tyr Ser Val
100 105 110

Leu Gln Trp Asp Pro Tyr Ser Gln Gly Thr Tyr Ser Gln Lys Thr Tyr
115 120 125

Ser Gln Leu Asn Ile Leu Gly Gln Lys Gly Met Glu Val Gly Arg His
130 135 140

Ser Leu Phe Leu Lys Asn Leu Leu Ser Asn Ile Arg Ala Thr Asn Gln
145 150 155 160

Lys Pro Lys Ser Lys Leu Thr Lys Pro Ile Tyr Leu Val Leu Cys Val
165 170 175

Gly Pro Ser Ala Leu Arg His Leu Ala His Leu Phe Trp Arg Ile
180 185 190

<210> 97
<211> 91
<212> PRT
<213> Homo sapiens

<400> 97

Gly Arg Gly Gly Gln Gln Gly Gly Leu Gln Asn His Asp Val Phe Leu
1 5 10 15

Thr Gly Leu Thr Ser Ala Ser Ile Cys Leu Thr Leu Gln Pro Met Ser
20 25 30

Leu Phe Leu Val Val Ile Leu Met Gly Ala Leu Arg Ser Gln Arg Arg
35 40 45

00196US1.ST25

Gly Leu Arg Arg His Cys Leu Tyr Leu Trp Ser Tyr Ile Arg His Leu
50 55 60

Tyr Phe Val Met Asn Ser Lys Ser Ser Ser Lys Met Gln Leu Trp Gly
65 70 75 80

Asn Ser His Arg Asn Phe Ser Gln Phe Trp Leu
85 90

<210> 98
<211> 201
<212> PRT
<213> Homo sapiens

<400> 98

Ser Arg Asp Gln Ile Thr Pro Ser Arg Ser Trp Arg Lys Asp Pro Ser
1 5 10 15

Ser Glu Gly Thr Trp Leu Gly Gly Leu Ser Val Ser Gly Ser Cys Val
20 25 30

Gly Ile Ser His Ser Val Gly Ala Ser Val Ile Ala Gly Trp Pro Phe
35 40 45

Asp Asn Ala Thr Cys Lys Met Ser Gly Leu Val Gln Gly Met Ser Val
50 55 60

Ser Ala Ser Val Phe Thr Leu Val Ala Ile Ala Val Glu Arg Glu Val
65 70 75 80

Ser Trp Leu Asp Tyr Ala Ala Asn Gly Leu Ala Leu Arg Gly Ala Thr
85 90 95

Ala Ser Asn Ala Gly Leu Ala Gly Arg Leu Gly Leu His His Gly Lys
100 105 110

Trp Gly Ile Leu Ser His Lys Glu Lys Gly Pro Gly Pro Ser Cys Pro
115 120 125

Leu Pro Lys Leu Gly Glu Pro Asp Glu Asp Thr Thr Thr Pro Phe Trp
130 135 140

Lys Ala Arg Pro Trp Leu Ala Phe Val Gly Ile Pro Gly Ala Cys Glu
145 150 155 160

Glu Leu Lys Ser Ser Pro Tyr Phe Leu Ser Ser Arg Asn Pro Ala Thr
165 170 175

Ser Lys Ser Glu Pro Gly Glu Pro Glu Leu Arg Gly Pro Ala Tyr Gly
180 185 190

Trp Val Thr Val Trp Leu Gly Arg Lys
195 200

<210> 99
<211> 218
<212> PRT
<213> Homo sapiens

<400> 99

Thr Pro Lys Arg Leu Lys Leu Arg Ser Leu Ile Leu Ser Ser Val Lys
1 5 10 15

00196US1.ST25

Glu Phe Leu Glu Ser Pro Pro Ser Leu Gly Met Phe Leu Ser Ser Trp
 20 25 30
 Phe Asn Ile Ala Ala Asp Ala Pro Ala Ile Thr Ala Thr Phe Gln Thr
 35 40 45
 Ala Lys Tyr Gly Lys Arg Met Lys Arg Arg Arg Ala Cys Leu Gly Val
 50 55 60
 Pro Cys Ile Ile Ser Ile Tyr Ile Trp Ala Glu Pro Ser His Arg Ala
 65 70 75 80
 Thr Pro Tyr Val Ser Val Ser Tyr Cys Tyr Ile Ala Thr Thr Lys Phe
 85 90 95
 Pro Cys His Thr Thr His Ile Cys Arg Leu Ala Arg Val Gln Phe Leu
 100 105 110
 His Ala Gly Leu Arg Gln Ala Val Leu Leu Arg Val Thr Val Ala Glu
 115 120 125
 Leu Ile Pro Phe Leu Thr Ala Gly Leu Cys Phe Ser Val Thr Val Pro
 130 135 140
 Cys Ala Phe His Leu Pro Trp Val Asp Glu Arg Lys Pro His Leu Ser
 145 150 155 160
 Thr Gly Leu Ala Thr Ser Val Pro His Gly Pro Lys Arg His Gln Arg
 165 170 175
 Ala Asp Arg Asn Arg Asp Leu Leu Arg Ser Arg Leu Lys Thr Gly Thr
 180 185 190
 Leu Pro Arg Leu Phe Thr Ser Tyr Pro Lys His Arg Cys Ile Thr Lys
 195 200 205
 Pro Gln Val Lys Gly Lys Lys Tyr Asn Pro
 210 215

<210> 100
 <211> 175
 <212> PRT
 <213> Homo sapiens
 <400> 100

Thr Ile Ile Cys Cys Ile Phe Gln Asn Ser Cys Asn Val Ser Asn Thr
 1 5 10 15
 Lys Lys Arg Met Phe Val Val Met His Ile Ser Ser Thr Leu Ile Leu
 20 25 30
 His Ile Val Tyr Ile Tyr Gln Asn Ile Ser Ser Thr Ser Lys Ile Cys
 35 40 45
 Ser Ile Ile Val Val Gln Lys Asn Leu Asn Asn Tyr Asn Val Leu Phe
 50 55 60
 Ile Ser Lys Trp Phe Ile Arg Phe Lys Ile Phe Leu Val Phe Asn Phe
 65 70 75 80
 Phe Ile Tyr Tyr Leu Ile Pro Phe Asn Phe Leu Lys Tyr Ile Arg Ser
 85 90 95
 Ser Tyr Phe Arg Val Lys Phe Lys Ser Phe Glu Tyr Leu Ile Leu Gln

00196US1.ST25

100

105

110

Ser Phe Leu Pro Leu Ile Phe Pro Gln Trp Pro Val Ser Val Val Met
 115 120 125

Met Leu Leu Arg Asn Gly Leu Ala Thr Cys Thr Lys Pro Ile Leu Trp
 130 135 140

Gln Trp Phe Ser Arg Lys Glu Lys Ala Leu Leu Val Tyr Trp Gln Gly
 145 150 155 160

Asp Arg Trp Gln His Ser Asn Leu Ser Pro Thr Glu Asp Gly Gly
 165 170 175

<210> 101

<211> 184

<212> PRT

<213> Homo sapiens

<400> 101

Ser Tyr Leu Gly Pro Val His Ser Phe Ser Gln Thr Ala Ser His Ala
 1 5 10 15

Ile Pro Ser Met Lys Ile Leu Pro Phe Pro Leu Ser Phe Phe Ser Ser
 20 25 30

Leu Ile Tyr Ser Pro Val Leu Val Ser Ser Phe Pro Ser Ser Ser Gly
 35 40 45

Gln Thr Leu Phe Thr Ser Leu Thr Thr Pro Ser Lys Ile Val Leu Ile
 50 55 60

Thr Val Tyr Pro Leu Asn Thr Leu Tyr Arg Ser Trp Pro Ser Pro Asp
 65 70 75 80

Asn Val Leu Cys Ile Phe Trp Phe Thr Cys Cys Val Ser Ser Phe Leu
 85 90 95

His Cys Cys Lys Glu Ile Pro Glu Thr Gly Phe Ile Lys Lys Arg Gly
 100 105 110

Leu Ile Asp Ser Gln Phe Cys Arg Leu Tyr Gly Lys His Val Ala Gly
 115 120 125

Ile Cys Leu Ala Ser Gly Glu Asp Ser Gly Asn Leu Gln Ser Trp Gly
 130 135 140

Arg Arg Gly Ser Arg His Ile His Ser Arg Ser Ser Lys Ala Lys Gly
 145 150 155 160

Asp Val Pro His Thr Ser Lys Pro Asp Leu Met Arg Thr His Tyr His
 165 170 175

Glu Asn Ser Thr Arg Gly Trp Cys
 180

<210> 102

<211> 212

<212> PRT

<213> Homo sapiens

<400> 102

Tyr Asn Asn Ser Leu Leu Tyr Ile Ser Ile Phe Cys Leu Ser Gln Val

1 5 10 15

Ser Thr Leu Ser Gly Ile Val Cys Ser Phe His Ser Phe Trp Leu Ser
20 25 30

Trp Glu Gln Gln Ser Ser Ala Thr Pro Ala Met Val Ile Val Gln Met
35 40 45

Ser Asn Gln Ser Ser Ile Thr Ile Arg Ser Lys Leu Gln Thr Phe Ser
50 55 60

Pro Leu Ala Phe Arg Ile Leu Tyr Thr Gln Phe Met Met Tyr Arg Lys
65 70 75 80

Cys Leu Leu Leu Phe Ser Leu Gln Leu Gly Phe Gln Lys Glu Ile Met
85 90 95

Ala Ser Arg Asn His Leu Tyr Leu Gln Met Ala Gly Ser Ile His Arg
100 105 110

Arg Ala Ile Tyr Gln Gln His Tyr Ser Met Phe Gln Pro Lys Met Ser
115 120 125

Leu Pro His Val Arg Gln Thr Thr Tyr Ile Gly Thr Thr Ala Val Thr
130 135 140

Val Phe Phe Ser Thr Phe Leu Ile Met Lys Ser Met Leu Asn Ser Thr
145 150 155 160

Met Ala Phe Pro Phe Ser Trp Gln Ser Thr Ala Tyr Thr Ile Leu His
165 170 175

Leu Thr Val Phe Ile Leu Pro Ser Gly Lys Ala Leu Trp Lys Gln Ser
180 185 190

Arg Gly Tyr Phe Gly Asp Leu Asn Tyr Tyr Asn Leu Leu Ser Leu Leu
195 200 205

Cys Phe Leu Gln
210

<210> 103
<211> 219
<212> PRT
<213> Homo sapiens

<400> 103

Ser Leu Ser Gly Gln Leu Phe Ala Leu Leu His Thr Leu Ser Ile Cys
1 5 10 15

Ile Ser Tyr Asn Val Tyr Arg Leu Tyr Gly Val His Ser Thr Trp Arg
20 25 30

Thr Phe Lys Thr Ile Ile Ala Leu Gly Phe Gly Ser Glu Phe Met Leu
35 40 45

Pro Cys Gln Ser Phe Leu Phe Val Thr Trp Pro Phe Lys Tyr Ala Ala
50 55 60

Thr Cys Asn Thr Gly His Ser Asp Pro Ile Arg Leu Met Ala Ser Cys
65 70 75 80

Ser Ser Arg Ser Leu Ser Val Cys Trp Tyr Ile Met Leu Gly Leu Cys
85 90 95

Ser Arg Arg Arg Glu Ala Ser Gln Leu Ala Thr Gly Tyr Lys Ser Ile
 100 105 110
 Ala Glu Asn Asp Lys Arg Gln Gly Pro Ser Leu Gln Arg Ser Ala Lys
 115 120 125
 Lys Ile Leu Asn Val Tyr Lys Asp Leu Lys Arg Asn Ser Pro Arg Gln
 130 135 140
 His Tyr Ser Val Leu Asp Tyr Gly Tyr Tyr Thr Leu Leu Gln Leu Leu
 145 150 155 160
 Cys Ser Ser Glu Gln Lys Thr Glu Asp Phe Glu Met Ser Thr Thr Pro
 165 170 175
 Ala Pro Glu Tyr Asn Gly Thr Phe His Leu Phe Leu Val Thr Phe Ile
 180 185 190
 Phe Phe Cys Cys Trp Ile Pro Tyr Ile Ile Val Ser Ile Ser Gln Ala
 195 200 205
 Ser Thr Met Val Asn Ser Gly Trp Thr Leu Pro
 210 215

<210> 104
 <211> 208
 <212> PRT
 <213> Homo sapiens
 <400> 104

Arg Thr Leu Tyr Trp Tyr Phe Tyr Phe Lys Phe Ser Ile Phe Gly Met
 1 5 10 15
 Ala Glu Cys Cys Tyr Lys Val Ser Arg Ser Pro Leu Pro Leu His Cys
 20 25 30
 Ala Asp Leu Leu Ser Ser Ile Gln Gly Thr Asp Leu Arg Asn Leu Gln
 35 40 45
 Val Val Thr Ser Cys Leu Val Phe Phe Leu Gly Arg Tyr Pro Ser Leu
 50 55 60
 Gln Thr Cys Arg Asn Leu Asn Leu Leu Pro Leu Thr Tyr Leu Val Pro
 65 70 75 80
 Cys Gly Leu His Phe Thr Val Cys Ala Asn Ser Leu Phe Ile Thr Ile
 85 90 95
 Leu Thr Leu Asp Ser Arg Ala Ser Pro Thr Ser Pro Phe Ser Val Thr
 100 105 110
 Leu Thr Phe Leu Leu Ser Val Thr Met Ser Asp Leu Leu Phe Ser Pro
 115 120 125
 Ile Phe Cys Pro Leu Gln Ile Leu Lys Pro Ser Phe Trp Phe Arg Pro
 130 135 140
 Leu Lys Gly Val Thr Gly Val Cys Tyr Pro Lys Val Val Pro Lys Ile
 145 150 155 160
 Ser Lys Leu Glu Lys Lys Thr Lys Asn Lys Lys Ile Pro Tyr Pro Ser
 165 170 175

00196US1.ST25

Trp Met Phe Leu Lys Gly Phe Leu Gly Gln Val His Val Arg Ile Ala
180 185 190

Gly Val Ser Leu Gln Lys Asp Phe Ser Trp Pro Ser Phe Val Thr Val
195 200 205

<210> 105 -
<211> 231
<212> PRT
<213> Homo sapiens

<400> 105

Met Lys Pro Val Leu Pro Pro Ala Lys Arg Thr Glu Ser Leu Asn Gly
1 5 10 15

Met Val Asp Ala Ala Tyr Trp Thr Val Tyr Phe Ile Leu Ala Ala Pro
20 25 30

Gly Ile Cys Val Ile Ser Leu Glu Met Phe Tyr Met Cys Leu Val Glu
35 40 45

Leu Gln Asn Asn Thr Ser Leu Asn Ile Ser Cys Ile Thr Gly Ser Ile
50 55 60

Gln Phe Ile His Asn Lys Val Ser Pro Val Leu Tyr Arg Arg Ile Tyr
65 70 75 80

Lys His Ser Val Lys Ser Ile Asp Arg Ile Gly Asp Arg Gly Leu Lys
85 90 95

Ile Lys Ile Asn Ala Phe Leu Val Leu Phe Gly Val Gly Lys Ser Asn
100 105 110

Leu Phe Phe Met Leu His Arg Ser Gln Phe Phe Val Phe Phe Glu Ser
115 120 125

Arg Pro Val Ile Gly Arg Cys Lys Glu Pro Lys Arg Lys Asn Gln Lys
130 135 140

Pro Thr Ala Ser Phe Gln Asn Arg Ser Gln Lys Arg Lys Glu Tyr Glu
145 150 155 160

Ser Ser Arg Ser Phe Asn Cys Ser Phe Ile Ile Ser Ser Arg Lys Arg
165 170 175

Gly Cys Met Ile Val Ser Lys Thr Lys Glu Glu Thr Ala Lys Glu Arg
180 185 190

Asn Val Gly Asn Leu Leu Val Glu Ala Met Thr Leu Leu Gly Glu Ile
195 200 205

Leu Ser His Phe Leu Ser Ser Cys Phe Ser Ile Met Phe Phe Thr Leu
210 215 220

Ser Ile Gln Tyr Lys Thr Leu
225 230

<210> 106
<211> 188
<212> PRT
<213> Homo sapiens

<400> 106

00196US1.ST25

Ser Glu Asp Leu Gln His Arg Val Lys Tyr Ala Arg Glu Gly His Ile
1 5 10 15

Thr Phe Ile Phe Thr Phe Ile Leu Ile Tyr Phe Leu Ser Ile Asn Leu
20 25 30

Phe Cys Phe Tyr Ile Ser Val Val Ala Gln Asn Ser Asn Cys Ser Lys
35 40 45

Asn His Ser Gly Leu Asn Thr Gly Lys Ile Ser Phe Gly Thr His Asn
50 55 60

Gly Leu Lys Asn Ser Cys Val Pro Phe Thr Gly Glu Ile Arg Lys Gly
65 70 75 80

Ile Glu Lys Phe Pro Ile Pro Pro Asn Pro Ala Ser Pro Ile Pro Ile
85 90 95

Ser Arg Thr Ser Phe His Leu Ile Ser Leu His Leu Gln Met Val Val
100 105 110

Leu Asn Leu Gln Ile Asn Lys Pro Lys Thr Glu Ser Ile Ile Phe Ser
115 120 125

His Leu Val Phe Pro Ser Asn Ser Leu Ile Ser Val Thr Cys Pro Ile
130 135 140

Thr Leu Pro Gly Ile Gln Pro Pro Lys Gln Gly Gly Leu Leu Pro Leu
145 150 155 160

Gln Trp Thr Pro Gly Ile Gln Val Leu Leu Leu Ala Pro Lys Cys Pro
165 170 175

Gln Cys Pro Val Leu Pro Asn Gln His Ile Gln Gln
180 185

<210> 107
<211> 230
<212> PRT
<213> Homo sapiens

<400> 107

His Cys Asn Gly His Cys Arg Phe Ser Arg Leu Ser Pro Glu Gly Glu
1 5 10 15

Trp Pro Pro Phe Lys Val Cys Ser Glu Asn Thr Pro Gly Ser Arg
20 25 30

Ala Ile Val His Lys Asp Ala Leu Gly Ser Val Val Leu Thr Asn Val
35 40 45

Glu Thr Tyr Arg Ala Leu Val Ala Glu Ala His Ser Asn Gln Pro Lys
50 55 60

Leu Gly Arg Arg Ala Gly Ala Gln Cys Ile Trp Glu Gly His Arg Leu
65 70 75 80

Gly Ser Pro Ser Ser Ser Gly Pro Pro Ser Arg Met Ile Gly Leu Arg
85 90 95

Pro Pro Ser Gly Ser Pro Arg Arg Gln Pro Ser Ser Glu Glu Ser Gly
100 105 110

Asp Lys Arg Ser Ala His Leu His His Ser Leu Pro Glu Thr Arg Leu

115

120

125

Asn Cys Ile Ile Cys Phe Cys Pro Thr Cys His Lys Pro Thr Ile Trp
 130 135 140

Ser Asn Ala Arg Pro His Pro Arg Lys Thr Arg Pro Gln Pro Trp Ala
 145 150 155 160

Leu Glu Gly Leu Cys Tyr His Leu Pro His Ala Leu Gln Lys Ser Asp
 165 170 175

Glu Ser Ser Pro Ile Ile Pro Thr Leu Ser Leu Arg Ser Pro Trp Met
 180 185 190

Pro Arg Gly Arg Arg Phe Asn Met Gly Gln Lys Val Ala Thr Thr Glu
 195 200 205

Leu Leu Gly Ser Ser Pro Tyr Leu Leu Ser Leu Asp Leu Leu Pro Gly
 210 215 220

Leu Gln Arg Val Lys Ser
 225 230

<210> 108
 <211> 178
 <212> PRT
 <213> Homo sapiens

<400> 108

Phe Arg Ser Lys Phe Ile Pro Val Gly Glu Gly Leu Val Glu Val Glu
 1 5 10 15

Gln Gly Gln Arg Val Gln Val Glu Tyr Ser Asn Phe Lys Asn Leu Lys
 20 25 30

Ser Glu Thr Leu Gln Asn Leu Lys Leu Phe Glu His His Asp Thr Gln
 35 40 45

Arg Lys Tyr Ser Leu Asp Ser Arg Phe Leu Tyr Leu Glu Gly Ser Thr
 50 55 60

Lys Arg Tyr Asp Ile Asn Ile Pro Lys Phe Lys Asn Ile Asn Ser Lys
 65 70 75 80

His Phe Pro Gln Ala Phe Trp Ile Lys Asp Thr Gln Thr Gly Ile Arg
 85 90 95

Ser Trp Leu Pro Glu Glu Glu Thr Gly Glu Asp Ile Pro Val Val Ala
 100 105 110

Leu Met Lys Gly Trp Gly Pro Glu Asn Gln His Pro Leu Phe Gly Cys
 115 120 125

Phe Leu Leu Trp Arg Val Ala Leu Glu Gly Gly Pro Pro Phe Ile His
 130 135 140

Val Leu Ser Gly Arg Pro Phe Thr Leu Arg Gly Ala Ser Leu Pro Cys
 145 150 155 160

Leu Asp Phe Pro Gly Leu Cys Pro Leu Ser Ala Glu Val Lys Val Ser
 165 170 175

Gly His

<210> 109
 <211> 237
 <212> PRT
 <213> Homo sapiens

<400> 109

Ser Ala Ser Gln Ser Ala Gly Ile Thr Gly Met Ser His Cys Ala Gly
 1 5 10 15
 Arg Ser Leu Val Ser Phe Tyr Ser Ala Val Met Cys His Ile Thr Met
 20 25 30
 Leu Pro Ser Met Ile Asp Cys Val Tyr Asn Thr Arg Pro Val Arg Ser
 35 40 45
 Tyr Cys Thr Leu Leu Tyr Leu Phe Cys Val Glu Ile His Arg Tyr Leu
 50 55 60
 Ala Leu Cys Tyr Ser Arg Arg Gln Arg Pro Ala Gln Gln His Gly Met
 65 70 75 80
 Gln Ala Trp Gly Leu Glu Leu Thr Gly Cys Thr Thr Gly Pro Gly Val
 85 90 95
 Arg Gln Pro His Arg Leu Gly Leu Arg Glu Cys Ile His Ala Val Cys
 100 105 110
 Ala Arg Thr Arg Phe Ser Asp Arg Val Leu Ala Val Ser Leu His Met
 115 120 125
 Thr Val Leu Ile Phe Glu Trp Ser His Val Phe Gly Leu Leu Asn Arg
 130 135 140
 Met Phe Val Phe Ser Glu Lys Met Pro Ile Ala Ser His Leu Gln Leu
 145 150 155 160
 His Gln Phe Arg Phe Arg Phe Glu Leu Lys Cys Asp Leu Ser Ile Gln
 165 170 175
 Lys Lys Ser Ile Ser Thr Phe Gly Lys Ile Ser Arg Leu Lys Lys Thr
 180 185 190
 Phe Arg Val Phe Lys Arg Thr Ser Ser Val Lys Ser Ser Ile Leu Lys
 195 200 205
 Gly Cys Pro Ile Asn Lys Leu Leu Trp Asn Cys Phe Ile Ser Ala Leu
 210 215 220
 Phe Leu Cys Gly Thr His Ser Ser Lys Thr Ala Glu Asp
 225 230 235

<210> 110
 <211> 221
 <212> PRT
 <213> Homo sapiens

<400> 110

Phe Phe Leu Phe Leu Ser Leu Ser Phe Ser Phe Cys Leu Lys Ile Met
 1 5 10 15
 Lys Asn Ala Gly Ser Val Glu Arg Arg Lys Cys Pro Cys Pro Thr Ser
 20 25 30

Cys Arg Tyr Leu Ser Cys Phe Phe Ile Leu Leu Lys Ile Glu Leu Lys
35 40 45

Val Phe His Phe Leu Phe Phe Asn Phe Arg Gly Tyr Asn Gly Asp Ser
50 55 60

Gly Thr Asn Arg Lys Phe Val Phe Thr Arg Pro Val Lys Arg Val Phe
65 70 75 80

Leu Leu Ile Pro Val Phe Val Ser Gly Cys Met Ala Ile Ala Ser Lys
85 90 95

Phe Phe Pro Leu Phe Pro Ser Pro Ile Thr Gln Arg Val Ser Ser Phe
100 105 110

Asn Thr Leu Glu Ser Ile Leu Leu Asp Ala Thr Thr His Met Cys Val
115 120 125

Asn Glu Asn Thr Asp Lys Lys Ser Leu Asn Ile Gly Asn Gly Val Ile
130 135 140

His Ala Phe Leu Thr Leu Ile Phe Leu Leu Phe Trp Ile Pro Phe His
145 150 155 160

Val Ser Tyr Ile Tyr Pro Ile Tyr Phe Gln Asp Cys Val Ile Phe Tyr
165 170 175

Ser Ile Val Leu Thr Phe Phe Met Leu Ser Gln Leu Val Thr Tyr Tyr
180 185 190

Val Tyr Glu Leu Phe Leu Leu Leu Met Leu Lys Ile Ser Trp Asp Lys
195 200 205

Leu Leu Gly Val Leu Phe Glu Ser Phe Leu Gly Ile Lys
210 215 220

<210> 111

<211> 235

<212> PRT

<213> Homo sapiens

<400> 111

Phe Glu Asp Lys Phe Leu Leu Thr Val Val Ile Thr Arg Gly Leu Ile
1 5 10 15

Ser Thr Leu Leu Glu Ser Leu Thr Tyr His Asn Phe Ser Met Leu Cys
20 25 30

Glu Gly Met Asn Ser Leu Thr His Leu Ile Met Thr Thr His Ile Met
35 40 45

Leu Leu Ile Gly Asn Asp Leu Tyr Glu Thr Tyr Arg Lys His Ile Thr
50 55 60

Ala Ser Gln Met Thr Pro Ile Ser Pro Ile Ala Val Ser Asp Lys Phe
65 70 75 80

Glu Ser Gly Pro Met His Leu Cys Trp Ala Pro Gln Asn Lys Glu Val
85 90 95

Asp Tyr Leu Arg Ser Thr Thr Leu Ala Ile Ser Pro Leu Asn Ile Lys
100 105 110

00196US1.ST25

Leu Ile Cys Pro Ile Ala Pro Pro Ser Ser Gly Pro Gly Leu Trp Ile
115 120 125

Gly Met Thr Tyr Leu His Ile Gln Phe Cys Lys Ser Leu Gly Ile Ile
130 135 140

Gln Asp Gly Arg Ile Asn Gly Gln Leu Lys Leu Phe Leu Leu Ser His
145 150 155 160

Pro Phe Gln Cys Phe Leu Pro Trp Ser Leu Leu Ile Ile Ser Met Leu
165 170 175

Phe Asn Ile Tyr Leu Glu Glu Phe Met Ala Val Ile Thr Ile Met Ala
180 185 190

Thr Ile Phe Tyr Tyr Leu Cys Met Pro Gly Ile Val Leu Ser Ala Ser
195 200 205

Gly Ile Arg Ser Cys Lys Gly Leu Val Thr Phe Tyr Arg Trp Asp Trp
210 215 220

Asp Ser Asp Val Ser Cys Leu Phe Lys Ser Ile
225 230 235

<210> 112
<211> 134
<212> PRT
<213> Homo sapiens

<400> 112

Ser Ser Pro Val Val Cys Trp Gln Ser Leu Ala Phe Leu Ser Leu Trp
1 5 10 15

Lys Tyr His Ser Ile Ser Val Leu Ile Ser Thr Trp Cys Ser Ser Cys
20 25 30

Val His Val Cys Leu Gln Ile Ser Pro Phe Tyr Lys Asp Thr Val Ile
35 40 45

Leu Asp Ser Gly Ser Phe Arg Pro His Leu Ile Phe His Lys Asp Pro
50 55 60

Ile Ser Lys Cys His Ile Leu Trp Tyr Trp Gly Leu Leu Lys His Ile
65 70 75 80

Asn Phe Arg Glu Thr Asn Leu Asn Leu Gln Tyr Thr Ser Arg Met Glu
85 90 95

Glu His Gly Ile Arg Leu Ser Gln Thr Gln Leu Leu Thr Phe Trp Phe
100 105 110

Ser Ser Pro Gly Gln Glu Thr Pro Ser Ala Gly Lys Leu Glu Thr Trp
115 120 125

Lys Thr Gly Leu Lys Thr
130

<210> 113
<211> 229
<212> PRT
<213> Homo sapiens

<400> 113

00196US1.ST25

His Thr Asp Thr His Ser His Ile His Thr Gln Ser Leu Ile Lys Tyr
 1 5 10 15
 Met Ile Ile Phe Met Cys Lys Ser Phe Gln Gln Ile Ile Ile Phe Tyr
 20 25 30
 Ile Arg Ala Cys Tyr Lys Glu Lys Ile Tyr Gln Phe Glu Lys Gly Lys
 35 40 45
 Pro Leu Ser Arg Tyr Cys Phe Ile Arg Thr Val Val Ser His Ile Ile
 50 55 60
 Ser Lys Leu Leu Met Lys Tyr Lys Thr Phe Thr Ile Ile Lys Ser Leu
 65 70 75 80
 Lys Arg Thr Lys Asn Lys Leu His Lys Leu Lys Ser Ser Val Ala Asn
 85 90 95
 Met Met Phe Cys Glu Leu Leu Ile Val Tyr Val Cys Ile Tyr Ala Trp
 100 105 110
 Tyr Leu Pro Gly Ile Cys Phe Met Phe Leu Arg Pro Gln His Cys Cys
 115 120 125
 Lys Arg Ile Val Phe Pro Leu Leu Tyr Asn Tyr Phe Asp Ile Ser Tyr
 130 135 140
 Asn Leu Pro His Glu Tyr Gln Thr Phe Tyr Arg Lys Tyr Leu Ile Pro
 145 150 155 160
 His Ser Leu Ser Pro Ala Ala Phe His Val Cys Leu Val Lys Ala Ile
 165 170 175
 Val Thr Lys Leu Pro Phe Phe Lys Glu Ala Ser Val Asn Gln Tyr Ile
 180 185 190
 Ser Leu Ser Leu Phe Phe Tyr Val Cys Leu Ser His Thr Asn Thr Gln
 195 200 205
 Ala Asn Ile Tyr Ile Tyr Ile Phe Asn Ile Thr Asp Ser Phe Leu Ala
 210 215 220
 Val Leu Ser Ile Ile
 225

<210> 114
 <211> 189
 <212> PRT
 <213> Homo sapiens

<400> 114

Ser Leu Leu Asn Leu Leu Phe Asn Met Asn Ile Ala Ser Leu Ala Leu
 1 5 10 15
 Phe Val Leu Thr Leu Tyr Ile Thr Phe His Leu Phe Ile Leu Ile Cys
 20 25 30
 Leu Tyr Ile Ser Ala Phe Leu Ile Gly Asn Ile Leu Ser Leu Ser Phe
 35 40 45
 Tyr Pro Ile His Leu Leu Asp Phe Glu Val Phe Lys Leu Phe Val Phe
 50 55 60
 Asn Val Asn Met Tyr Met Ile Gly Phe Lys Phe Thr Ser Trp Leu Val

00196US1.ST25

65 70 75 80

Phe Ser Val Tyr Ser Ile Tyr Tyr Ser Leu Phe Pro Phe Ser Ser Met
85 90 95

Leu Ser Phe Gly Leu Ile Ile Leu Leu Lys Ile Phe Arg Ile Ser Phe
100 - 105 110

Val Val Leu Phe Trp Leu Ile Cys His Leu Arg Leu Leu Ile Thr Val
115 120 125

Ile Phe Gln Val Thr Leu Tyr His Phe Val His Val Tyr Lys Thr Leu
130 135 140

Gln Gln Cys Thr Ser Ile Leu Cys Leu Leu Asn Phe Arg Leu Leu Leu
145 150 155 160

Ser Ser Tyr Ile Leu Phe Leu Phe Pro Thr Tyr Val Ile Arg Pro Ile
165 170 175

Leu His Cys Phe Cys Val Cys Phe Lys Lys Pro Ser Phe
180 185

<210> 115
<211> 242
<212> PRT
<213> Homo sapiens

<400> 115

Glu Glu Asn Ser Met Lys Ala Asp Lys Gly Arg Thr Glu Val Asn Gln
1 5 10 15

Cys Ser Ile Asp Leu Gly Glu Asp Asp Met Glu Phe Gly Glu Asp Asp
20 25 30

Ile Asn Phe Ser Glu Asp Asp Val Glu Ala Val Asn Ile Pro Glu Ser
35 40 45

Leu Pro Pro Ser Arg Arg Asn Ser Asn Ser Asn Pro Pro Leu Pro Arg
50 55 60

Cys Tyr Gln Cys Lys Ala Ala Lys Val Ile Phe Ile Ile Ile Phe Ser
65 70 75 80

Tyr Val Leu Ser Leu Gly Pro Tyr Cys Phe Leu Ala Val Leu Ala Val
85 90 95

Trp Val Asp Val Glu Thr Gln Val Pro Gln Trp Val Ile Thr Ile Ile
100 105 110

Ile Trp Leu Phe Phe Leu Gln Cys Cys Ile His Pro Tyr Val Tyr Gly
115 120 125

Tyr Met His Lys Thr Ile Lys Lys Glu Ile Gln Asp Met Leu Lys Lys
130 135 140

Phe Phe Cys Lys Glu Lys Pro Pro Lys Glu Asp Ser His Pro Asp Leu
145 150 155 160

Pro Gly Thr Glu Gly Gly Thr Glu Gly Lys Ile Val Pro Ser Tyr Asp
165 170 175

Ser Ala Thr Phe Pro Ser Phe Gly Lys Pro Thr Val His Asn Thr Arg
180 185 190

Asn Lys Arg Arg Phe Leu Phe Asn Gly Pro Thr Ile His Cys Gln Thr
195 200 205

Ile Pro Phe Gln Ala Lys Val Leu His Thr His Ala Leu His His Lys
210 215 220

Val Asp Lys Tyr Ile Glu Glu Ala Gly Thr Gly Val Phe Pro Lys His
225 230 235 240

Gly Leu

<210> 116

<211> 206

<212> PRT

<213> Homo sapiens

<400> 116

Ser Gly Lys Thr Thr Pro Arg Asn Arg Leu Leu Leu Pro Pro Cys Lys
1 5 10 15

Pro Glu Ala Gln Leu Leu Ser Leu Glu Asn Arg Lys His Asn His Gly
20 25 30

Tyr Ser Glu Gly Gln Gly Gln Val Leu Cys Lys Trp Asp Cys Gly Gly
35 40 45

Gln Trp Glu Gly Phe Trp Gly Ser Leu Ser Cys Leu Cys Asn Trp Ala
50 55 60

Met Gln Pro Cys Lys Cys Gln Glu Thr Leu Asn Lys Thr Glu Pro Glu
65 70 75 80

Ala Asn Lys Lys Pro Ala Phe Thr Cys Ser Phe Pro Phe Cys Asn Glu
85 90 95

Ile Ser Ile Cys Thr Leu Ile Trp Pro Thr Ile Pro Gly Glu Ile Ser
100 105 110

Trp Asp Val Ser Phe Val Thr Leu Asn Phe Leu Val Pro Gly Leu Val
115 120 125

Ile Val Ile Ser Tyr Ser Lys Ile Leu Gln Val Cys Phe Leu Gln Val
130 135 140

Leu Pro Leu Asn Phe Thr Gln Ala Trp Gly Tyr Phe Cys Asn Leu Arg
145 150 155 160

Ile Trp Gly Arg Arg Thr Pro Lys Ser Ser Arg Gln Leu Asn Leu Asp
165 170 175

Ser Leu Pro Arg Ser Thr Thr Leu Arg Lys Glu Arg Ile Phe Leu Glu
180 185 190

Val Ile Ser Leu Leu Cys Phe Leu Leu Ile Thr Lys Val Ile
195 200 205

<210> 117

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<221> misc feature
 <223> Peptide substrate

<400> 117

Ala Pro Arg Thr Pro Gly Gly Arg Arg
 1 5